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The Canadian Practitioner and Review

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Original Communications

PRESIDENTIAL ADDRESS*

By Dr. P. H. Bryce (Hon. President).

Sir Lomer, Your Honor, Monseigneur, Ladies and Gentlemen:

At the request of my friend, Dr. J. D. Page, the Vice-President, I have, as Honorary President, undertaken for the evening the duties of the President of the Canadian Public Health Association.

I am sure that you will regret with me the fact that, owing to ill-health, our esteemed president, Dr. C. J. Hastings, Medical Officer of Health of Toronto, is not present. Dr. Hastings has brought into the work of public health administrative qualities of an unusually high order, and has further adopted in the evolution of the scientific side the most practical modern ideas and obtained results in every branch of his work which in some particulars are quite remarkable.

Many present know that some six years ago, at a meeting of public health officers in Ottawa, it was thought well with the ever-growing importance of Canadian problems that the many workers in public health, scattered throughout the various provinces, should have some common meeting ground whereon to discuss those public matters in which they were so directly interested; and so it happened that in December of 1911 the first annual convention of the Canadian Public Health Association was held in Montreal under the patronage of His Royal Highness the Duke of Connaught, which meeting was made further notable by the presence of Sir Robert Borden, Sir

*Delivered at the Annual Meeting of the Canadian Medical Association, Quebec, September 13, 1916.

Lomer Gouin, Premier of Quebec, the Hon. Mr. Burrell and other important personages. The annual meetings have since been held in Toronto, Regina, Toronto, and now in Quebec, there being no meeting in 1914 owing to the sudden outbreak of war.

But though this is but our fourth meeting, it will not be forgotten that for forty years the enthusiasts in Public Health have been preaching its gospel in America, since in 1872 five physicians of the United States met in Atlantic City and organized the American Public Health Association, which in 1884 opened its doors to Canada, nine years later broadened them again to receive Mexico, and ten years later Cuba was also admitted, thereby co-ordinating all official and individual health efforts on the North American continent. Many here know what has been accomplished during the forty years; but it may not be without interest to others to recall a few principal events in public health. In 1866 the cause of no communicable disease was known, since the germ theory of disease, though often imagined, had not been demonstrated, and ten years later, Bastian, the greatest of London's physiologists, advocated experimentally his beliefs in the spontaneous origin of disease germs, although Louis Pasteur had, with others, demonstrated the presence of bacilli in the disease of anthrax in sheep and the vibrios of chicken cholera in fowls. From 1867, Lister, believing that Pasteur's germ theory with regard to the ferments in beer and wine bore directly upon the infection of wounds had begun his work, based upon the asepticism of wounds, and by 1881, when Pasteur victoriously demonstrated that not only did germs cause anthrax, but that he could attenuate them so that animals could be vaccinated against this most virulent disease, Prof. Lister had reduced in the wards of Edinburgh Infirmary the mortality in surgical operations from 75 per cent. to less than 15 per cent. Antiseptic surgery was, however, simply the adjunct of the scientific laboratory work, which followed in 1882 with Koch's discovery of the bacillus of tuberculosis, and in 1884 of the bacillus of cholera. In 1886 Laveran showed us the hæmatozoon of malaria, Lœffler the bacillus of diphtheria and Behring produced its antitoxin in 1887, while the germ of ubiquitous typhoid yielded to Klebs its secret at the same time. Great, however, as was the wonder of le grand maitre's discovery in 1882 regarding vaccination in animals, the world did not

grasp the meaning of these results of his divine imagination until in 1885 he vaccinated Joseph Meister, the boy with fifteen wounds from the bites of a rabid dog, with the attenuated virus from the spinal cord of an animal dying from hydrophobia. The Czar of Russia, a country where rabid wolves terrorized the people, and the Sultan of Turkey showed their appreciation of Pasteur's work of world-wide benefits by subscribing along with his grateful countrymen many thousand francs for the erection and endowing of the Pasteur Institute, devoted henceforward forever to education in the science of bacteriology, which Prof. Grancher at its opening in 1897 said Pasteur had discovered, and to practical research work in every field of biological science bearing upon health, agriculture and industry. This was almost the first recognition by rulers and governments that *salus populi est suprema lex.*

Turning to Canada in those early days of science we see only one university in any sense developing the science of medicine, not as yet recognized, as having any direct relation to government; but in 1882 Ontario took the first step forward in permanently establishing by law a Provincial Board of Health with broad and well defined powers, which became the model for boards in other provinces, Quebec following in 1886, the year after the historic fatal epidemic of smallpox, which caused 7,000 deaths in a single year in the province. Since that time many remarkable results have been attained; the contagious deaths of former years having been reduced in many centres to less than half their previous rate, while many laboratories, both provincial and municipal, have done much to assist executive officers in their work in the matter of water supplies, sewage disposal, milk supplies and the control of contagious diseases. Different universities have established courses for the education of physicians and engineers in public health work. Though, perhaps, but little experimental work has been done here, yet we have well illustrated the practical application of discoveries by what has been accomplished during the stress of war. Diseases hitherto the dread of armies in the field—cholera, smallpox, typhoid and tetanus—have been prevented and the mortality from septic wounds has been reduced ever since, fifteen years ago, to a degree hitherto not dreamed of.

The discoveries of science, in the arts, industries and in transportation have transformed the world in the matter of

human comforts and the amenities of civilization. Yet to nothing may mankind so logically sing pæans for benefits received as to the progress in the medical sciences and especially in the field of preventive medicine. We now know the causes of disease and the means of their prevention. We know the curative and preventive qualities of sunlight; we know what pure air introduced through ventilation does to make homes happy and healthy.

But while speaking broadly, we can say this much has been accomplished and that a knowledge of what to do has been learned, yet we in Canada cannot be said to have done more than largely follow where scientists of other countries have led us. Perhaps in the practical application of science we have done as much as many others; but in the search after scientific truth Canada has, like Great Britain, little reason for self-gratulation and very great need for self-examination. We may fairly ask, having universities, several of which are amongst the largest in the world in numbers, why no single discovery in science of high importance has been given to the world from them? Why has it been that in agriculture the Federal Governments have spent millions in experimental farms, while in the science of public health, not a single Federal research laboratory, as such, exists. Some provinces, indeed, my own old province, has done something, and is doing more; but we in the Federal departments have no laboratory to which we can go to carry on a single investigation. As it is exactly forty years since, as a graduate just leaving Toronto University, I was appointed to the Chair of Science in the newly organized Agricultural College in Guelph, and as on working to the limit of my ability for thirty-five years in public health work, I think I am entitled to attempt a diagnosis of the situation. At that time we were, as a nation, very young, and, indeed, as a province quite undeveloped. Even common school education was by no means universal; but what existed there was of the old routine type, with the classical and literary features attached in the superior schools. We have seen that science was, till then, empirical in many branches, and most so in medicine. Theological belief in disease as the proof of the anger of the Deity was general, and for man interference to prevent it seemed sacrilege. But inevitably in a country so sparsely populated, problems of material development necessarily predominated. Immigrants

were demanded, but "Old" Canada was already settled; we had no place to put them, so railroads had to be built. Large sums of money were needed and were sometimes hard to get. When the railroads were built and immigrants began to come, many looked upon them as a means rather of material advantage to themselves instead of becoming their protectors and acting as apostles of Canadian citizenship and for the promotion of their social and moral welfare. We had, as a matter of fact, not been educated to think along scientific and sociological lines from childhood up. I have examined curricula of our public schools, and it is melancholy to see how little even yet the child mind is brought to examine natural objects through scientific eyes. His later mind is but the expression of ideas gathered from childhood up, unless taught while young how to know scientifically. Without a knowledge of scientific methods, legislators cannot logically be impressed with the great advances which through such exact knowledge become possible to every young man or woman in effective work, nor can they appreciate the untold advantages to health, which a basic knowledge of science means in the development of the child from infancy to youth and in his maintenance in health and usefulness in later life.

But I am to-night only expected to illustrate what this public health meeting stands for. It serves to illustrate to the people of Canada what has been accomplished; it desires to show in the problems to be discussed on the programme what it deems necessary and essential for investigation and, if possible, solution, and it seeks to lead the Canadian public to an appreciation of the bearing of these problems on their personal, family and national well-being.

Persistent ulceration of a lupus patch should make one suspicious of commencing malignant disease, especially if there be much surrounding infiltration.—*The Urologic and Cutaneous Review.*

OSTEITIS DEFORMANS *

Dr. Charles Sheard, Jr., M.R.C.P., Lond.

Osteitis deformans, or Paget's disease, can be defined as a disease of bones, always accompanied by an extreme degree of arteriosclerosis in the vessels, with cardiac hypertrophy and dilatation as a result of this. The disease, while hardly a rare one, is still sufficiently uncommon in this part of the country to warrant a brief description of its salient points being given. It is one of those conditions that present such a striking clinical picture as to be readily recognized at a glance, when seen for the second time. There may, however, be some who have never run across a case, and for such the following brief notes are intended.

The changes that occur in the bones are the most striking feature; these consist of a considerable thickening combined with a softening of the bones, so that they become bent, and various curvatures and deformities are produced. When viewed with the X-ray these are somewhat suggestive of infantile rickets, in both cases the bones are thickened and distorted out of their normal shape, but the pathology of the two conditions is widely different, rickets being due to an over-production of cartilage associated with delayed ossification, and dependent upon some nutritional defect, whilst in Paget's disease there is a chronic inflammatory process going on in the bones, with extensive new bone formation under the periosteum, the central portion of the bones becomes softened by inflammatory exudate and absorption of the osseous structure takes place. In the latter stages the bones become rather brittle and fractures are apt to occur. The epiphyseal changes seen in rickets are of course not found. All of the bones are not affected—only those in the vertical axis of the body and the bones comprising the vault of the skull. The clavicles are said to be involved in some cases, but in the three cases of which I have notes, these were normal. The thigh bones, tibiæ and fibulæ, vertebræ, bones of the forearms and cranium are the principal ones affected.

The appearance of a patient in an advanced stage of this disease, as illustrated by the photograph, is typical. There is

*Presented before the Academy of Medicine, Toronto, Oct. 10, 1916.

marked kyphosis of the spine which bends beneath the weight of the enlarged head. The chest is emphysematous, the ribs become ankylosed to the vertebræ so that even less movement of the thorax takes place during respiration than is usual in cases of emphysema, and the breathing is entirely diaphragmatic. The thighs and legs bow outwards from supporting the trunk.

Fig. I.

Showing head enlargement, and bony deformities. The heart was much enlarged, the apex beat being five inches from the mid-sternal line.

The femora can usually be felt to be thickened through the muscles of the thigh. The head, when viewed from the front, has the appearance of an inverted triangle, its base directed upward. The dome of the skull is enlarged, bosses, usually symmetrical, may be present. The eyes are sunken and the bony orbit overhanging. The lower part of the face is rather

frail by contrast, differing strikingly from the submaxillary prognathism of acromegaly. Changes in the head bones do not always occur and the skull was normal in one of the three cases in this series. As would be expected from the nature of the deformities, the height is reduced and the patients appear to be rather dwarfed. The gait is characteristic and owes its qualities to the outward bowing of the thighs and legs, an un-

Fig. II.

Radiogram of both forearms, showing uniform thickening of radius and ulna of right forearm, while those of the left remain normal. The sclerotic, tortuous vessels can be seen.

certain equilibrium being maintained with the aid of walking sticks. Walking is accomplished as a slow shuffle, the head being thrust forward in a manner suggestive of a turtle or duck. These cases have been likened to all manner of beasts from geese to gorillas, but they do not seem to closely resemble any of them, and have characteristics all their own.

Arteriosclerosis of an extreme degree is a constant accompaniment, the vessels are tortuous and thickened, and can be

seen to pulsate. The radials are hard and beaded to the finger, and the superficial temporal arteries can be seen standing out in a conspicuous manner. The heart is affected secondarily to the sclerosis of the systemic vessels, hypertrophy and dilatation occurring, although anginal attacks are rare. Albuminuria is also exceptional. Eye ground examination shows a sclerosed condition of the retinal arteries. Thus the fundus of the patient whose picture is given showed a moderate amount of arteriosclerotic change, but not as much as one would expect from the condition of the peripheral vessels. The central light reflex along the vessels was somewhat more marked than normal, the veins showed indentation where they were crossed by the thickened arteries, with ampulliform dilatation of their distal portion, beyond the point of intersection. There were several small patches of pigment representing localized œdema of the retina, such as occurs in arteriosclerosis. No hæmorrhages were seen in either eye, nor did the arteries have the marked silver wire appearance that is sometimes seen.

The disease is more common in men. This may be due to the fact that women's skirts conceal the deformity present in the lower limbs, so that some cases are missed in this way, although the three cases in this small series were all males and all over 60 years of age. As regards the age incidence, the disease is not met with in its typical form, that is with well developed bony changes and advanced arteriosclerosis, in persons under 40 years of age; and often they are some years older than this. The course, however, is so slow and the changes in the bones so gradual that the onset is usually many years before the patient notices anything amiss. It is thought by Dr. Sooke, of Boston, that the onset is usually some time in the third decade earlier than is usually supposed. Carpenters seem to be particularly affected and there are several instances in the literature where followers of this trade suffered from the disease.

The symptoms are usually referable to the condition of the heart, thus dyspnœa on exertion, and cardiac dropsy are commonly complained of. Two out of three cases had swelling of the ankles at night. Aching pains in the limbs are often complained of and are usually put down as rheumatic. They are never severe, and in the later stages of the disease entirely disappear. They are not similar at all to the pains of intermittent claudication and are probably due to the inflammatory changes

in the bones, rather than to the arteriosclerosis. Malignant tumors of various kinds, particularly sarcoma, tend to occur in these patients, and this was pointed out by Paget in his original article. In three of his five cases death occurred from cancer.

The prognosis is determined by the condition of the heart; apart from this the patients are fairly comfortable. The patient shown was able to carry on his work, that of a carpenter, for several years after the disease had become well advanced, the circumstance of his right forearm becoming bent, he found of the greatest advantage as he was able to hook his hand around corners and work with remarkable dexterity on this account. He suffered little discomfort, beyond the fact that of late years he has had difficulty in finding hats large enough to fit him.

The nature of osteitis deformans is still as obscure as when Sir James Paget first described it some forty years ago. It has been suggested by French observers that the disease is a manifestation of congenital syphilis in the aged. In only one of my three cases was the Wassermann taken, and then it was negative. Post-mortem examination fails to throw any light on the cause, beyond showing that the changes occurring in the bones are inflammatory. The pituitary body remains normal, and there appears to be no connection whatever between this disease and acromegaly. The inflammatory nature of the bony lesions would seem to suggest a chronic infection of some kind as the most probable explanation, beyond this it is impossible to go. What is responsible for these curious changes that take place so slowly is still a puzzle, shrouded in mystery, and will probably remain one until some genius succeeds in culturing a short chain streptococcus from the blood of one of these patients and sets the matter forever at rest.

52 College St.

When an old man boasts to you of a rejuvenation of his virile powers, examine his prostate. It's irritation—not renewal of youth.

Editorials

OUR WOUNDED IN ENGLAND

When we consider the wonderful kindness of all classes in Great Britain to our soldiers, and especially after they were wounded, we have to regret very deeply that any prominent citizen of Canada should try to make it appear that we in this Dominion did not appreciate the extent and character of the magnificent hospitality of our kinsfolk overseas.

The Medical Press and Circular, of November 22nd, says in its chief editorial, over the signature of "Sinaphis": "It would be hard to find a more glaring instance of untimely indiscretion than Sir Sam Hughes' speech to the Empire Club of Toronto on November 10th. . . . He declared that Canadian soldiers were allowed to go under the knife of first year medical men, while men from the Dominion were not utilized. . . . It would be difficult to imagine any kind of statement better calculated to make bad blood between the Dominion and the Mother Country than one which creates a suspicion that the wounded Canadian is not being properly treated over here. Such a suggestion is . . . an outrage to humanity. It is seriously disquieting to the families of the Canadian soldiers; it is nothing short of barbarous. By making a statement of this kind Sir Sam Hughes writes himself down as an inconsiderate bounder of a peculiarly maleficent type."

The Spectator (English) of November 18th gives Sir Sam Hughes much credit for his good work in

England, but records certain words attributed to him in a press interview in which he apparently suggested that English officers had "scrapped" the Canadian equipment—meaning no doubt the Ross rifle—out of jealousy, which, of course, is "absurd." He also insisted that Canadian soldiers should be treated exclusively in Canadian hospitals, because of the inexperience of British surgeons, which is even more ridiculous.

THE PERSECUTION OF A DOCTOR

The word persecution is used by the Toronto *News* regarding the treatment of Dr. R. M. Simpson (Col.), Winnipeg, by the Manitoba Government, which goes on to state that the government had him arrested in London, England, charging him with conspiracy to defraud the Province of Manitoba in connection with the erection of the Parliament buildings.

Dr. Simpson went to England with the C. E. F. After serving with the Base Hospital in England he was made C.O. of one of the largest hospitals in France with the rank of Colonel. After his imprisonment in England, he was brought back to Canada for trial. After vexatious delay the case was submitted to the grand jury, at which trial, according to the regular legal practice, he was not represented by counsel. The jury did not report in favor of a "true bill." Their verdict practically meant honorable acquittal.

One would suppose that a doctor of high standing in a city such as Winnipeg, who was rendering good

service to his country, would not be subjected to this sort of petty and contemptible persecution.

We congratulate Dr. Simpson on his "honorable acquittal" and wish him the highest success in his future service for his country.

MEDICAL CERTIFICATES

The *British Medical Journal* speaks very strongly regarding the conduct of physicians who give their patients certificates as to their physical condition which (to put it mildly) are not correct. The patients use these certificates to get leave of absence from their munition work, or to get an ordinary leave extended. The Minister of Munitions has stated that such certificates are often issued with "insufficient consideration."

The General Medical Council of Great Britain has taken the matter up, and has given a warning that the issue of untrue certificates shall be deemed infamous conduct in a professional respect, and any physician adjudged guilty of such conduct is liable to have his name erased from the Medical Register. The *Journal* says that the man who thus sins makes us "a reproach to our neighbors, a scorn and a derision to them that are round about us."

Our Canadian military authorities have informed the Ontario Medical Council that many improper certificates have been given by physicians in various parts of the province, but especially in good, loyal Toronto. They will investigate further, and if they find new evidence of "insufficient consideration," they will do something more than send names, as they have in the past; they will bring charges of

infamous conduct against the offenders. If the names of a few of these offenders were erased from the Medical Register it might have a deterring effect on others.

THE FILM PLAY "DAMAGED GOODS"

This is a play on the subject of syphilis adopted from that of the French dramatist Brieux. It was presented to the Fellows of the Academy of Medicine in private view in order that an opinion might be expressed as to the desirability of recommending it as an educational film. From an artistic point of view the play is far above the average, the film pictures being exceedingly good, but we cannot recommend it for educational purposes. We see no objection to a presentation of the play to a band of soldiers if the officers approve, but even for soldiers we are not sure that the exhibition of this play would produce any good result.

CARE OF THE FEEBLE-MINDED

We are glad to know that great interest is being taken in the treatment of that numerous unfortunate class known as the feeble-minded. Efforts are now being made to provide what are known as industrial farms, and erect on the same homes for the feeble-minded boys and girls.

One of the serious matters connected with the proposal is the financial aspect. It has not yet been decided in connection with the necessary expenditure what proportion the government and each

municipality, respectively, should be responsible for. We are glad to know, however, that the men and women are working together very earnestly, and we hope that a satisfactory, definite scheme will soon be decided on.

OLEOMARGARINE

The food known as butterine, made from oleo margarine, is very commonly used in Great Britain and the United States. Considering the high cost of living, the price of dairy butter is a somewhat serious matter. When we consider that the margarine preparation costs half or less than half the present price of butter, it seems advisable to make some statement as to what butterine is. Dr. Hastings, M.O.H., Toronto, has made a report, in which he says: "I do not see any reason why oleomargarine should not be manufactured as a substitute for butter." He also adds that a large number of experts consulted agree that oleomargarine is a healthful food product.

SYMPOSIUM ON THE MEDICAL PROFESSION

We are glad to announce that a somewhat unique Symposium with features of great interest and value will appear in the January issue of the *Medical Review of Reviews*. It is a symposium on the medical profession, with contributions from such distinguished laymen as Andrew Carnegie, John Wanamaker, Jerome K. Jerome, Dean Howells, Margaret Atherton, Geo. W. Cable, Julian Hawthorne, Edith

Thomas, Minnie Madeen Fiske, John Philip Sousa, Booker Washington and others.

We are told, and should certainly expect from the names given, that many of these contributions will be " literary gems." The publishers propose to send out about 50,000 copies of this January issue.

Editorial Notes

Grace Hospital, Toronto

A fire occurred in Grace Hospital at 5 a.m., November 28. It, fortunately, happened that the resident doctors, nurses and firemen did magnificent work, and got out all the inmates, including a number of young babies, without any casualty. The damage done amounted to about $6,000. Repairs were made at once, and the hospital was reopened December 11th.

Western Hospital, Toronto

It is said that the sanitary conditions in the old part of the Western Hospital are not satisfactory, and the Fire Chief, in addition, stated that the conditions from a fire standpoint were not good. It is hoped that in the near future the old building will be removed and a new fire-proof building erected. At a meeting held December 5th it was decided that plans should be prepared for the new structure at once.

Trent Valley Medical Association

The last meeting of this Association was held in Trenton, December 8th. There were present physicians of Trenton, Consecon, Stirling, Wooler and Frankford. Dr. Stevenson, Trenton, was elected president. It was decided that, owing to the immense increase in the cost of living, it was necessary for the members to make a substantial increase in their charges. Drs. Farley and Farncomb were directed to draw up a new tariff of fees.

Ontario Medical Association

The next meeting of the Ontario Medical Association is to be held in Toronto on May 30th, 31st, and June 1st, 1917, in the Mining Building of Toronto University. The Committee have been able already to secure promises from professional men of eminence, including Dr. Balfour, Rochester, Minn.; Dr. McHenty, New York; Dr. Christian, of Boston; Dr. Chapman, of Montreal, and Dr. Babcock, of Philadelphia. It is expected the meeting will be a very successful one, and a large attendance is probably assured.

The co-operation of every member of this Association is requested to make another "war-time" meeting the best ever held.

The Canadian Hospital Train

The hospital train, which has been prepared to carry from Halifax and St. John the wounded returning soldiers who are being sent home for treatment, was completed at the Government works at Moncton, Dec. 20th. The cars are ordinary sleeping cars converted into hospital cars, in pairs. In each pair one car will have five cots on one side, the present berths being left on the other side for men who can sit up by day.

The hospital train will run as far as Winnipeg, distributing patients to Montreal, Kingston and Toronto on its way. Men going farther west will be rested in Winnipeg, and will then be taken on to their destination by the Canadian Pacific, Canadian Northern, and Grand Trunk Pacific in hospital cars provided by these companies, or by the Railway Department.

The Commission has arranged for 1,500 hospital beds at various centres for these soldiers, and has selected physicians and surgeons for their treatment.

These men will be in addition to the convalescents, who may be expected to continue arriving at the present rate of several hundred per week. The "bed cases" will not be placed in the same institutions as the convalescents.

Among the buildings secured for the new class of patients are the Strathcona Hospital at Edmonton, a part of Queen's University at Kingston, and a wing of the Grey Nunnery at Montreal.

Approximately ten thousand soldiers now in British hospitals will be brought to Canada within the next three or four months.

Military Hospitals Commission of Canada

This Commission, now well known to all Canadians, with its headquarters at Ottawa, is doing great work for the disabled soldiers who have returned from the front. There were over 2,000 under their care November 1st. Of these 20 per cent. were supposed to be suffering from tuberculosis, and were treated mostly in sanitariums, while 39 are in hospitals for the insane.

Up to October 5th, 6,208, suffering from wounds or illness, have been cared for by the Commission since the war began.

For those who cannot resume their occupations, special training in other callings is provided free of cost. Those suffering from shell shock and other nervous troubles are treated at Cobourg. Those requiring artificial limbs are supplied, free of charge, mostly in Toronto.

Commissions have been appointed in all the provinces of Canada to assist the discharged men in obtaining steady and profitable work. In addition, many municipal commissions, especially in towns and cities, are co-operating.

American Medical Editors' Association

The annual meeting of this Association for this year was held October 25-6 in New York City. Many interesting papers were read, and we are told the symposium on "The Doctor and the Law," with special reference to "Anti-Narcotic Legislation," created widespread interest, and a large attendance from the profession, the judiciary, the internal revenue department and drug manufacturers. The officers elected for next year were: President, Dr. G. M. Piersol, of Philadelphia; Vice-Presidents, Dr. Geo. W. Kosmak, of New York, and Dr. Robert M. Greene, of Boston; Secretary-Treasurer, Dr. J. Macdonald, Jr., of New York. The next meeting will be held in New York City, with headquarters at the McAlpin Hotel, June 4-5, 1917.

News Items

Medical Council of Saskatchewan

The following were elected recently members of the Medical Council of Saskatchewan: Dr. W. S. Miller, Battleford; Dr. G. A. Peterson, Saskatoon; Dr. J. F. Irvin, Yorkton; Dr. W. H. Wardel, Moose Jaw; Dr. D. C. Johnstone, Regina; Dr. H. E. Eagleshaw, Weyburn, and Dr. A. W. Argue, Grenfell.

Toronto University Graduating Class

The following received the degree of M.B. at a special convocation Dec. 11th:—James Franklin Adams, Hanover; Frederick Grant Banting, Alliston; William Wray Barraclough, B.A., St. John, N.B.; Henry Norman Bethune, Toronto; Thomas Wilmot Bleakley, D.D.S., Kindersley, Sask.; Frank Herbert Boone, Toronto; Arthur John Boyce, B.A., Goderich; William Easson Brown, Toronto; Beaumont Sanfield Cornell, Athens, Ont.; Daniel Irwin Davis, Port Coquitlam, B.C.; Gordon Murray Dobbin, Toronto; John Sutherland Douglas, Dunnville; Hugh Alexander Elliot, B.A., Midland; Charles Farquharson, Agincourt; Douglas Gordon Findlay, Toronto; Donald Roderick Finlayson, Lucknow; Charles Elias Frain, Norwich; Ruggles Kerr George, B.A., Toronto; Joseph Appelbe Gilchrist, B.A., Toronto; Malcolm George Graham, Rodney; Albert Robert Hagerman, Parkland, Alta.; Roy John Hardstaff, M.D., West Devonport, Tasmania; Frederick William Watts Hipwell, Alliston; Edgar Duncan Hutchinson, Sarnia; William George Jamieson, Camborne; Andrew Murray Jeffrey, Toronto; Frederick Macnab Johnson, St. Thomas; Wilfred Joseph Johnston, Craigvale; Cecil Vernon Mills, Corunna; Harold Alexander Mitchell, B.A., Vancouver, B.C.; Albert Montgomery, Toronto; Hector Clive McAlister, Ridgetown; James Clarence McClelland, Toronto; John McWilliam McDonald, Lakeside; Charles Spurgeon Macdougall, Kincardine; Angus MacKay, Woodstock; Robert MacKinlay, Aberarder; Fred Schlenker Parney, Edmonton, Alta.; Thomas William Parker Peacock, Stroud, Ont.; George Raymon Scott, Peterborough; Willmot Edward Lenox Sparks, Toronto; William Pelton Tew, Oil Springs; Newton Oscar Thomas, B.A., St. Thomas; Charles Everett Thompson, Hamilton; Arthur Thomson, M.A., Toronto; Hugh Duncan Veitch, Winterbourne, Ont.; Thomas Esmond White, Hamilton.

Queen's University Medical Graduates

By holding an extra war session during the summer and fall Queen's Medical College has been able to graduate fifty-six new doctors six months earlier than otherwise. Most of the graduates will enter the Canadian and Royal Army Medical Corps at once. The list is:

Degree of M.B.—L. N. Armstrong, Kingston; H. M. Barnes, B.A., Gananoque; W. J. D. Black, Kingston; O. K. Blackett, Port of Spain, Trinidad, B.W.I.; J. P. Bonfield, Ottawa; H. A. Boyce, Harrowsmith; Bruce Cannon, B.A., Kingston; J. M. Clark, Scugog; G. H. T. Clarke, Manzanilla, Trinidad, B.W.I.; C. B. Corbett, Ottawa; R. F. Davidson, Toronto; J. R. Davies, Vancouver, B.C.; W. P. Downes, B.A., Hamilton; J. H. Fraser, B.A., Dalkeith; C. D. Gallagher, Kingston; Chilvers Gooch, Brooking, Sask.; E. J. Gordon, Highgate; Harry Hedden, Dunnville; R. K. Johnstone, Inverary; A. L. Leatherbarrow, Hampton Station, N.B.; W. H. Lloyd, Kingston; Benjamin Lyon, Kingston; J. O. MacDonald, B.S.C., Strathroy; P. M. MacDonell, M.A., Kingston; H. G. MacFarlane, Ridgetown; E. C. Mick, Powassan; G. F. McFadden, B.A., Sudbury; B. T. McGhie, Kingston; A. G. McGhie, Kingston; W. W. McKay, Pembroke; H. R. Niclin, Newton; E. W. Nolan, Toronto; F. A. O'Reilly, Wolfe Island; C. A. Palmer, St. Ann's Bay, Jamaica, B.W.I., J. R. Patterson, Peterboro; J. E. Power, Duluth, Minn.; F. L. Reid, Kingston; W. G. Robertson, Renfrew; J. P. Sweeney, Charlottetown, P.E.I.; A. J. Tripp, Fitzroy Harbor; R. J. Tucker, Paisley; J. B. Willoughby, Lyndhurst; J. A. Young, B.A., Griswold, Man.

Degree of M.D., C.M.—E. J. Brennan, M.B., North Bay; T. F. Carter, M.B, San Fernando, Trinidad, B.W.I.; W. T. Case, M.B., Georgetown, British Guiana; E. C. A. Crawford, Melville, Sask.; G. F. Denyes, Odessa; D. R. Fletcher, Ceylon; W. R. Grant, M.B., Sintaluta, Sask.; G. H. Johnston, B.A., Cataraqui; J. E. Cane, M.B., Kingston; J. A. Labelle, M.B., Ottawa; G. F. Laughlin, Point Anne; H. M. MacDonald, M.B., Owen Sound; D. K. F. Mundell, Kingston; W. C. Page, B.A., Kingston; G. S. Purvis, Viking, Alta.; C. M. Sellery, B.A., Cobourg; K. M. Shorey, Napanee; G. F. Sills, Tweed; L. D. Stevenson, B.A., Dunfermline, Scotland; A. B. Whytock, B.A., Madoc.

Medal in Medicine—Henry Hedden, Dunnville; A. B. Whytock, Madoc.

Medal in Surgery—K. M. Shorey, Napanee.—*Canada Lancet.*

Personals

Dr. W. A. Thompson is M.O. of the 249th Battalion, Regina.

Dr. Melville H. Embree returned to Toronto from overseas on leave, Dec. 4th.

Dr. Charles Sheard, Toronto, spent the latter half of November and part of December in New York City.

Dr. T. B. Richardson (Lt.-Col.), of Toronto, has been appointed President of the Military Medical Board, Toronto.

Dr. F. A. Lockhart was elected President of the Medico-Chirurgical Society of Montreal for the present year.

Major R. D. Rudolf, M.D., who spent some months in Toronto on leave, returned to the front, December 8th.

Dr. Geo. D. Porter, of Toronto, has charge of the laboratory of the Military Base Hospital (old General), Toronto.

Dr. Hadley Williams, of London, Ont., is now head of the surgical staff in the Ontario Military Hospital in Kent County, England.

Dr. J. F. Gilmour, Warden of the Central Prison, who resided in Guelph for some time, has now his headquarters in Toronto.

Dr. Gilmour has resigned from his position as Warden of the Guelph Industrial Farm, and has been appointed Inspector of Paroled Prisoners.

Dr. and Mrs. Grasett, who spent some time in England with their son Elliott, before he went to the fighting line, have returned to Toronto.

Dr. Chas. Temple (Capt.), of Toronto, is attached to Moore Barracks, at Folkestone, and will probably remain there until the spring, or perhaps longer.

Dr. A. H. Taylor (Capt.), M.O. 24th Battalion, Victoria Rifles, has been awarded the Military Cross for conspicuous bravery in the firing line.

Dr. Geo. A. Armstrong (Lt.-Col.), chief surgeon of the Royal Victoria Hospital, Montreal, is now consulting surgeon in the C.E.F., in London, England.

Dr. Ruggles George (Capt., C.A.M.C.), Toronto, was married to Miss Heaton, Dec. 12th, and expected after a short trip to return to the front.

Dr. H. R. Smith, Toronto, Medical Officer, 1st King's Own Royal Lancasters, was severely wounded early in December, and when last heard from was in the Rouen Hospital.

Dr. W. A. Macdonald, of Windsor, moved to Toronto November 25th. He is an officer in the C.A.M.C., and is at present attached to the Base Hospital at Exhibition Camp.

Dr. Walter Wright, of Toronto, left his home Dec. 22nd, and sailed from Halifax for England, where he will work in his specialty, diseases of the eye, with the C.A.M.C.

Dr. Fred. Nicolle (Capt., C.A.M.C.), of Chatham, contracted trench fever some months ago. After a time he was removed to England, and placed in the King's Hospital, London, in November.

Dr. Rowland W. Young, who practised in Oshawa for some years, went overseas early in the war, and after doing work in a hospital in Malta, went on a transport running between Alexandra and Saloniki.

We are glad to announce that Philip, son of the late Dr. A. H. Garratt, Toronto, has nearly recovered from the injuries received a few weeks ago, and hopes to return to the front some time in January.

Dr. Harry Morrell, of Regina, who in his student days attended Trinity Medical College, and made many friends in Toronto, returned home on leave in October, but after a few days he was recalled to France, where he had been engaged in laboratory work for about two years.

Dr. C. P. Brooke Stammer (Capt., C.A.M.C.), after two years' service, is now in Toronto on sick leave visiting his parents. He is a native of Toronto, but was practising at Smith's Falls when he enlisted. When connected with No. 1 Stationary Hospital he did service in England, France, Gallipoli, Egypt, Malta and Saloniki.

We are glad to announce that another of our young medical graduates has distinguished himself. Dr. Chas. Stuart Wyne, a graduate of Toronto University, for a time a house-surgeon in the T.G.H., has been awarded the Military Cross for "working all night attending and dressing the wounded in the open, thereby saving many lives. Later, he carried out his fine work continuously for three days." He graduated in 1914, and about a year ago went overseas and joined the R.A.M.C. His home is in Toronto.

Dr. Chas. W. Gorrell (Col.), formerly C.O., Tapleau Hospital, resigned his position, and when last heard from was seriously ill in a private hospital in London. He was not in good health for some time, and was very much worried over indiscretions of administration in the Tapleau Hospital, notwithstanding the fact that he was exonerated from all blame in the matter. The report of the investigation committee by Canadian military authorities, working in connection with Scotland Yard, has not been published as we go to press.

It gives us much pleasure to announce that our young friend, Dr. Leeming Carr (Capt.), son of Dr. Leeming Carr, of Hamilton, has been awarded the Military Cross for continually leading stretcher-bearers under very heavy fire, and on many occasions himself rescuing wounded men. At the outbreak of the war he was studying medicine in the University of Toronto. He at once volunteered, and went over as a surgeon with No. 2 Casualty Clearing Hospital. He came back in 1915, and as soon as he received his degree returned at once to the front. We who have seen Leeming Carr on the football field with the University Rugby team, are not at all surprised that he showed conspicuous bravery when fighting Huns.

Obituary

JOHN HARKNESS, M.D.

Dr. John Harkness, of Irena, Ont., died October 31st. He graduated M.D. from McGill University in 1864.

SAMUEL W. McCONOCHIE, M.D.

Dr. S. W. McConochie, of Hamilton, died November 15. He graduated M.D. from Trinity University in 1883. After doing post-graduate work in London, Edinburgh and Dublin, he commenced practice in Hamilton.

MARSHALL SUTTON, M.D.

Dr. M. Sutton died suddenly at his late residence in Cooksville, November 23rd, aged 66. He graduated in 1877, and during the last twenty-three years had practised in Cooksville.

LIEUT.-COL. ANDREW R. GORDON, M.B.

The report of the death of Dr. Andrew Gordon, of Toronto, after a long illness, caused very deep regret among his numerous friends. He graduated M.B. from the University of Toronto in 1890. Shortly after graduating he commenced practice in Toronto and was very successful. He was also a good teacher of medicine and was for some time Professor of Clinical Medicine in the University Medical Faculty. His pastor well expressed the views of many when he said, "To a large community, in and out of the Church, Dr. Gordon had entered into their sympathies and smoothed their perplexities."

He went overseas with the University Hospital unit in May, 1915, and was invalided home in July. After an operation, from which he apparently soon recovered, he served in

the Exhibition Camp, Toronto, until April, 1916, when he was compelled to give up all kinds of work. After this he failed gradually but steadily, and died December 16th, aged 53.

C. R. CHARTERIS, M.D.

We have to announce, with deep regret, the death of Dr. C. R. Charteris, of Chatham, which occurred November 25th. He had suffered from heart disease for some time, but he attended to his practice and his duties as acting medical officer of health for the city up to the time of his death, which was both sudden and unexpected. He received his education in the Toronto School of Medicine and graduated M.D. from Victoria University in 1887. He was one of the best known and most highly respected physicians of Western Ontario. During his student days in Toronto he made a host of friends. All of those who survive were deeply affected by the news of his death. Our most kindly sympathy goes out to his family.

J. A. CULHAM, M.D.

We have to announce, with deep regret, the exceedingly sad but exceptionally glorious death of one of our ablest and most popular physicians in Western Canada, Dr. Culham, of Regina. He graduated from the University of Toronto in 1905. After practising in Caudit, Assa., he went to Regina. In that city he very soon forged to the front, and notwithstanding his comparative youth was considered one of its most eminent physicians.

As it happened he was considered both a skilful surgeon and a model family physician. Soon after the war began he went to the front, and was engaged for a time in the Medical Service, but he soon joined the combatant forces. His great valor was recognized by both the British and French military authorities. From Britain he received the Victoria Cross and the D.C.M., and from the French he received the Croix de Guerre in the latter part of September. His friends in Regina received the news announcing his death, Oct. 6. The *Western Medical News* tells us that he fell on the spot which he loved best, the " thickest of the fight."

Book Reviews

Diagnosis and Treatment of Surgical Diseases of the Spinal Cord and Its Membranes. By Charles A. Elsberg, M.D., F.A.C.S., Professor of Clinical Surgery at the New York University and Bellevue Hospital Medical College. Octavo of 330 pages, with 158 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, $5 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The spinal cord has, until quite recently, been the property of the internist. More than one neurologist, however, has recognized that he must do his own surgery if he is to have the maximum of success. Dr. Elsberg's book covers the whole field from the standpoint of the surgeon, and leaves little to be said in either the field of diagnosis or surgical treatment. This volume is largely a monograph, the best kind of medical writing one can have, because it is no compilation, but the original research of a man deeply interested in his subject.

The Treatment of Diabetes Mellitus, with Observations Upon the Disease Based Upon One Thousand Cases. By Elliott P. Joslin, M.D., Assistant Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Collaborator to the Nutrition Laboratory of the Carnegie Institution of Washington, in Boston. Octavo, 440 pages, illustrated. Cloth, $4.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

The treatment of this dread disease has gone forward with such strides during the last three years that we welcome any summary of the advance, especially when it comes from the pen of such a lucid writer as Dr. Joslin. Not only does the work deal with the Allen treatment, which has revolutionized both our ideas and our mortality tables, but it deals with diet and nursing, and gives a résumé of his instructions to patients, perhaps the most valuable of all. The tone of hopefulness of the author is most encouraging, and is well founded, if we are to judge by his experience of the last year. The Allen treatment is a very decided advance; it has come to stay, and every physician should master its details.

Blood-Pressure, from the Clinical Standpoint. By Francis Ashley Faught, M.D., formerly Director of the Laboratory of Clinical Medicine at the Medico-Chirurgical College, Philadelphia. Second edition, thoroughly revised. Octavo of 478 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1916. Price, $3.25 net. Canadian Agents, The J. F. Hartz Co., 24-26 Hayter Street, Toronto, Ont.

The second edition of this standard text-book is even more valuable to the clinician than the first. All phases of blood pressure are accurately discussed, yet not with the weariness of the superman whose quasi-science leads him to four decimal places. The object of this volume is to make the blood pressure an interesting and vital part of clinical medicine, and he has succeeded to an eminent degree.

A Text-book of Practical Therapeutics. With especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, B.Sc., M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; one-time Clinical Professor of Diseases of Children in the University of Pennsylvania. Sixteenth edition, revised and enlarged. Imperial octavo, 1,009 pages, with 149 engravings and 17 plates. Cloth, $4.75 net. Lea & Febiger, Publishers, Philadalphia and New York. 1916.

To have reached sixteen editions is abundant proof that a book has more than ordinary qualities. For a quarter of a century Hare's Therapeutics has been a standard text-book in all medical schools, and is now brought thoroughly up to date to keep pace with all modern improvements in diagnosis, and the recent changes in the pharmacopœia.

There is no other work that has things so well and systematically arranged, and so easy to hunt up as this book, which is intended to be on the desk beside the careful and scientific practitioner.

Mental Nursing. By W. H. B. Stoddart, M.D., F.R.C.P., Lecturer on Mental Diseases to St. Thomas's Hospital; late Resident Physician and Medical Superintendent, Bethlehem Royal Hospital. London: The Scientific Press, Ltd., 28-29 Southampton Street, Strand, W.C. Price, 2s. 6d. net.

This little handbook of almost one hundred pages consists of lectures to mental nurses, and is a good practical guide to mental nursing. Most of the lectures have already appeared in the *Nursing Mirror,* where they attracted favorable attention on account of their high practical value, commonsense and good spirit. Long experience, sympathy and insight are here shown in the way the various subjects are dealt with, and among the nineteen chapters there is not one which could be spared. The chapter on "Violent Patients," for example, is full of information and suggestions which would be helpful to any member of the staff of a mental hospital.

A Manual of Otology for Students and Practitioners. By Charles Edwin Perkins, M.D., F.A.C.S., Professor of Clinical Otology in New York University and Bellevue Hospital Medical College; Associate Aural Surgeon to St. Luke's Hospital; Assistant Aural Surgeon, New York Eye and Ear Infirmary; Fellow, American Otological Society, New York Otological Society, New York Academy of Medicine, etc. Illustrated with 120 engravings. Lea and Febiger, Philadelphia and New York, 1916.

In the preface to this work, Dr. Perkins says that in the preparation of this manual it has been his aim to lighten the difficulties of the study of otology for undergraduate and postgraduate students. We think it would be well to add to that, that the general surgeon, especially away from the larger centres as well as the aurist, will welcome and derive a great deal of profit from study of this book. No work of this kind has come under our notice where the details of the operations are so clearly described and the technique so carefully defined, with such good illustrations describing the procedure, as in the work of Dr. Perkins.

This is the first edition of this work and we are sure will have a large and ready sale.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia. Vol. III, 26th series. 1916. Philadelphia and London: J. B. Lippincott Company.

The articles in this number maintain the same high standard that has always characterized the International Clinics since they first began, nearly twenty-six years ago. The subjects dealt with are such that they touch nearly every specialty, while there are also essays of general interest, as, for example, Dr. Garrison's on "Trousseau," a regular classic in its way. Many hundreds of physicians all over the continent look forward to these four numbers each year.

Constipation, Obstipation and Intestinal Stasis. By Samuel Goodwin Gant, M.D., LL.D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Second edition enlarged. Octavo of 584 pages, with 258 illustrations. Philadelphia and London: W. B. Saunders Company. 1916. Cloth, $6.00 net; half morocco, $7.50 net. Canadian Agents, The J. F. Hartz Co., Limited, 24-26 Hayter Street, Toronto, Ont.

The second volume of this excellent work appears under a name slightly changed, and brings up to date the technic and treatment of an important branch of surgery. Many new illustrations and seven new chapters have been added. One can only praise the careful, conservative positions taken by Dr. Gant in the discussions of some important topics, such, for example, as intestinal stasis. He differs in this respect, in a marked degree, from the ordinary writer of a monograph, who is, oftener than not, an extremist. The press work and illustrations are beyond praise.

Reports of Societies

REPORT OF THE PROCEEDINGS OF THE STATED MEETING OF THE ACADEMY OF MEDICINE, TORONTO

December 5th, 1916.

Professor V. C. Vaughan, in his address upon the subject, "The Protein Poison and its Relation to Immunity and Disease," at the December meeting of the Academy of Medicine, discussed the position of the bacteria among living things. According to our conception and definition of vegetable life, we cannot consider bacteria to belong to this group—no cellulose is present—neither do they belong to the animal group. They must be placed in a group of their own.

They contain, instead of a nucleoproteid, a glyco-nucleoproteid. In the study of the chemistry of bacteria the colon bacillus has been used in a large series. Finding that this bacterium, when dead, is toxic to animals, an attempt was made to separate the poisonous from the non-poisonous part. The poisonous part is soluble in alcohol and ether, the non-poisonous is insoluble in alcohol.

Further study was made to find whether non-pathogenic bacteria likewise contain a poisonous and a non-poisonous substance. This was found to be true.

Further attempts were made to find out whether a similar poison was found in the higher nucleoproteids of animal cells, and later vegetable proteins, gluten of wheat, etc., were studied and proven to contain the same poisonous substances.

Every true protein contains a poisonous substance, and whatever the source of the protein the poison is similar.

Those with the larger content of the protein poison are the proteins of our daily food. Casein contains, perhaps, the highest proportion of the protein poison. It is not a poison when administered by the mouth. It is dialysable, but dialyses very slowly, and is absorbed very slowly from the intestine. It is split up into harmless amino acids by the digestive ferments. While not exactly alike from all its sources, its effects on animals are similar in its lethal properties.

The symptoms and lesions of disease are not due to the growth and multiplication of the infective bacteria in the body. For (1) they are rapidly growing during the stage of incubation when neither symptoms or lesions are present, and (2) dead bacteria injected into the blood stream cause the same lesions, e.g., in typhoid dead bacteria will cause all the ulcerative processes.

The strong, vigorous man elaborates substances which kill the invading bacteria. With heavy dose and great resistance the bacteria are rapidly killed and the protein poison sets up acute symptoms. In a study of the records of typhus and typhoid epidemics, from those in England and Ireland two hundred years ago down to personal investigations in the American Army in 1898, it is an outstanding fact that the case mortality is greater in the strong and vigorous than in the weak and feeble. The case incidence is greater amongst men than women, in young adults than older adults. In Ireland, many years ago, it was shown that amongst the poor, half-starved peasants, the case mortality was 1 in 23. Amongst the physicians, nurses, priests and social helpers the mortality was 1 in 2.

The dead bacillus of a species to which an animal is immune, quickly kills the animal from the rapid setting free of the toxic substances. The dead bacillus of a species to which the animal is non-immune, does not rapidly kill the animal, but it grows in the animal without the rapid killing and setting free of the protein poison. In the period of infection of an acute infectious disease there are no symptoms but during the invasion and fastigium, the invading bacteria are being destroyed, toxins are set free and the stage of symptoms has arrived. With leucocytosis active there is less toxin set free and symptoms are definitely less.

The subject of anaphylaxis was discussed in short, and it was pointed out that when a patient is susceptible to horse serum or diphtheria antitoxin, the injection of one minim will overcome this, and in a few hours any quantity may be injected without danger.

Professor Vaughan pointed out that the protein poison is a poison, not a toxin. There is no antidote. It does not form an antitoxin.

Vaccines may stimulate protective substances to overcome a localized lesion, but the use, for example, of tuberculin in

cases of extensive pulmonary disease seems rash, unscientific and doubtless does much harm in many cases.

The use of vaccine in a patient who is weak, e.g., in advanced myocardial disease, is to be deprecated. The setting free of the protein poison may cause disastrous results.

In closing, Prof. Vaughan illustrated his lecture by lantern slides, showing the construction of the large tanks in which he grows his bacteria for chemical study, and a series of charts illustrating the febrile reaction in animals subjected to subcutaneous and intravenous injections of various protein substances, bacillary and non-bacillary in origin.

The paper was discussed by Prof. Hunter, Prof. J. J. Mackenzie, and Major Fitzgerald.

J. H. Elliott, *Honorary Secretary.*

The Ocular Causes of Headache

Bedell (*Albany Medical Annals*), concludes his valuable article as follows:

1. Ocular headaches may be the result of a refractive muscle error or local inflammation.
2. Ocular headache, although most common in the afternoon, may be at any time of day or night.
3. The headache of middle life demands careful ocular examination.
4. Ocular headache may be present even with perfect distant and near vision.
5. In no case is the eye excluded until a cycloplægic has been used.
6. Occipital pain and nape of the neck discomfort extending even to the shoulders is often of ocular origin.
7. When proper correct lenses are ordered, they must be worn as directed and must be accurately placed before the patient's eyes.—*American Medicine.*

THE LAW AND THE DOCTOR*

By William Renwick Riddell, LL.D., Etc.
Justice of the Supreme Court of Ontario.

Law and medicine rest upon wholly different bases, and should, and in the nature of things must.

Medicine—I mean true scientific medicine—endeavors by all honest means to discover the workings of nature. No man can change the sequence of cause and effect in nature. He may indeed remove obstacles against the working of some cause or remove the cause itself, or add or substitute other causes; but he cannot himself make a cause operate differently from the rigid rule laid down for it by the nature of things or the Creator.

The rules of cause and effect in nature are generally called the "laws of nature"; and it is to some extent at least due to this terminology that medical men are often led astray in their conception of the law of the land—the rules governing in legal matters.

The law of the land is in its origin based upon custom. When man got tired of the primæval method of determining rights, and found it necessary to prevent the vindication of rights by personal and private brute force, it was necessary for him to find some judge or arbitrator to determine between man and man.

Wherever men have associated together for any length of time a course of conduct develops suitable in their view to their environment and the association. That course of conduct is a custom, and customs are from the earliest recorded time and earlier, and this in trivial as in important matters. How one man is to accost, to salute, another is a matter of custom, not only in the most polite and advanced, but in the most uncivilized and backward societies. Thieves have their etiquette as well as members of the Synod, and stevedores as well as members of the Academy of Medicine.

When the judge was called upon to determine the rights of two contending parties, he sought for the true rule of right, and found it in the customs of his people.

*Abstract of an Address before the Academy of Medicine, Toronto, Nov. 7th, 1916.

Some customs there were which it was not thought by the people worth while to enforce, some virtues which were left in the realm of conscience. Even yet we have no law to enforce courtesy or charity; we leave the cad to the reprobation of those whose opinion is worth having, and the ungenerous to his own conscience.

But customs which the people thought worth enforcing became the rules of law. These depended upon the people themselves. An illogical people had illogical customs, a generous people, generous customs; but whatever the custom was, that was the law.

An advancing community grows out of its old customs. What satisfied and suited the early folk irked their descendants. The law was unsatisfactory. In an advancing community the law is always unsatisfactory. Now law, to be law, should be fixed and certain. Where a custom has once been determined to be law it would not do to permit a mere individual to say that it shall no longer be the law. In every society except the most backward there is a law-making person or body, and that person or body has the duty of making the law fit the needs of the society. The legislator abolishes so much of the common law —that is, the body of customs—as is necessary, and thus modifies the common law.

In the course of time a very great quantity of legislation has been passed, so that in many instances an express statutory rule has been laid down. Doubts as to the exact meaning of such legislation there may be, just as there were doubts as to the exact custom; but in all but a comparatively small number of cases the law is clear. Sometimes difficulty arises in the interpretation of language employed, and the judge must do the best he can to determine its exact meaning. Sometimes it is not quite certain what the common law, i.e., the custom, was, and the judge must do his best to find out. But once the meaning of legislation is determined, the custom clearly made out, the duty of the judge is plain. He cannot change one jot or tittle of the law so determined. He may like it or dislike it; it may seem to him wise or unwise, just or unjust, reasonable or ridiculous; his duty is to apply it, and that only.

Let us take now the two professions and compare them. A medical man is attending a patient. He examines him to discover accurately his exact state, to apply the proper remedy, i.e., to remove some obstacle to the proper and normal operation of

organs or to strengthen some operating cause. He has been taught certain supposed "laws of nature," perhaps verified by high authority. No authority can make, unmake, or modify a law of nature. Sulphuric acid has the same effect on calcium carbonate in Fiji as in Potsdam, and it is just as unsafe to trifle with typhoid or explosives in Togoland as in Toronto.

The lawyer, judge or otherwise investigating a case tries to find the law applicable. He will delve into statutes, decisions, text writers' dicts, endeavor by all means and with all industry to determine what is the precise state of the law.

Often, like the scientist, he may fail; but, unlike the scientist, he cannot experiment and find out.

So far, the doctor and the lawyer are on the same plane; but now there is a difference. A law of nature is not made by man and cannot be altered by man; a "law" in the sense in which the word is used in the courts is purely man-made and can be altered by the same power.

It is as idle for a doctor or other person dissatisfied with a rule of law to gird at the judge or at the lawyers as it would be for a lawyer to make it a reproach to the medical profession that arsenic is poison, or smallpox infectious. The remedies are different. In medicine, apply other laws of nature; in law, get the law changed.

Another distinction between law and medicine is often lost sight of. The object of the profession of medicine is to cure the individual, to make or keep someone well. It is to the doctor a matter of perfect indifference what may be the moral character, the disposition, the past, of the person committed to his care. His business is to cure bad or good, vicious or virtuous, the most despicable or the most admirable.

With the individual as an individual the lawyer has nothing to do; it is when he comes in contact with others that the lawyer's study begins. What are his rights? That means, what is he entitled to receive at the hands of others? What is he entitled to keep from others? What may he do to others? What are his duties?

When Robinson Crusoe was on his island with but the company of his parrot and his goats, a doctor might find a place for his science. The lonely man might be sick or hurt, and the physician or surgeon would be a god-send. But there was no room for the lawyer. Crusoe had no rights to enforce against others, no duties to be enforced on him in favor of others.

But once another human being arrived on the island there were relative rights and duties; the right of Friday to be allowed to live, the duty of Crusoe to let him live. Life, liberty and a pursuit of happiness were the rights of each, and it was the duty of each to respect the right of the other.

Now let me take some concrete cases. A very eminent medical man says to me: "It would be interesting to note the working of the legal mind regarding such a question as this: 'Why should the legal definition of insanity and responsibility remain at variance with the medical conception, which is founded on experience rather than theory?'"

My answer is, there is no legal definition of insanity. No doubt there are a dozen or more medical definitions and half a hundred medical conceptions of insanity.

"If it should happen that a judge were to be called in by a medical man to assist in the treatment of an insane man, he would necessarily follow out the methods of medical treatment. And so where a medical man is called upon to assist in the administration of the law, he must adapt himself for that occasion to the principles of the law. Neither judge nor doctor need, while assisting in the province of the other, abandon the views he holds in his own province, nor does he. To the medical man the insane person is a sick man to be treated for his disease, and it is a matter of indifference whether he is a criminal or not; to the judge it is a matter of indifference whether a prisoner or a litigant be insane or not, the question is, is he capable of making a contract, is he responsible for his acts?" When we come to responsibility, the position is not quite the same.

There are as a rule only three cases in which want of mental capacity will come in question: responsibility for crime, capacity to make a will, and capacity to enter into a contract. Curiously enough, it is in only the first that we find medical men finding fault with the law. In the other cases I have never seen or heard any complaint. Nor has there been any complaint that those supposed to be insane are civilly liable in damages for their acts, just as one who unintentionally struck another would be. It is only when the responsibility criminally for acts comes in question that we find any collision of views; and that, I venture to think, is largely due to the intensive view the medical man naturally and properly takes of the individual.

Let us now enquire what our law says:

"No person shall be convicted of an offence by reason of an act done or committed by him when laboring under natural imbecility or disease of the mind to such an extent as to render him incapable of appreciating the nature and quality of the act or omission and of knowing that such an act or omission was wrong."

There are several things to bear in mind in this law:

It is only those whose minds are defective *ab origine* and those whose minds are diseased who are to be excused. The man who makes himself drunk with alcohol or drugs is not favored, although, indeed, if the intention be an element of the crime his state may be enquired into to determine if he had any, and, if any, what intention. In that I think all will agree the law is right.

Then, if the mind is so defective or diseased that the person cannot appreciate the nature of his act, all will agree that the unfortunate should not be punished criminally, whatever pecuniary penalty he may have to pay.

Again, if he knows well what he is doing, appreciates the nature and quality of his act or omission, but from his abnormal state of mind is not capable of knowing that the act or omission is wrong, he should be excused.

It will be seen that it is the extent of mental power which the law considers, not the use made of it. For example, if the mind of the accused is of such a character that he is capable of understanding the nature of an act he will not be excused, whether he is sane or insane, if he allows passion to overcome him, prejudice or hatred to sway his conduct. Again, if his mind is of such a character that he is capable of understanding that an act is wrong, i.e., forbidden by the law, he is not excused, sane or insane, if he sets up his own standard against the standard set up by his country and does that which is forbidden by the law, because he thinks it right.

Would it not be of the most evil consequence if anyone were to be allowed to decide for himself whether any act were right or wrong? In the realm of conscience that is the case; but society will not allow acts to be done with impunity which may be fully approved by the conscience of the actor, but which are forbidden by law. Charlotte Corday had the approval of her conscience when she killed Marat; would her act be tolerated by any civilized people?

For its own protection, for the protection of society and of the individual, the state has laid down certain rules of conduct; these must be obeyed, or there is anarchy.

Our test, then, of responsibility is mental capacity; and so far I fancy most medical men will agree that the test is not unfair.

But it is sometimes objected: What about the man whose mind is such that he has a perfect apprehension of the act and its unlawfulness, but has an irresistible impulse to do the act and, knowing that an act is morally wrong and against the law, is constrained by his diseased brain to do the act which he himself reprobates? There is a difference between irresistible impulse and an impulse which is not resisted. We have all had the latter kind of impulse. Nay, the fear of the most severe punishment is not always successful in causing effective resistance to an impulse to do wrong. Bill Sykes had an impulse to kill Nancy, which he did not resist. No doubt he would have said with more than a mere modicum of truth that he could not resist. Should he therefore go free? No one would say so. The fact that the mind is defective congentially or diseased does not make it the less true that many of the so-called irresistible impulses are not truly irresistible, but only unresisted.

Would it not be unsafe to leave open a defence grounded on supposed irresistible impulse? (I shall assume that there is such a thing.) If such a defence is open to the insane, it must needs be open to the sane; and the undoubted fact that as a rule in the insane the power of self-control is weakened and they are (speaking generally) prone to act on impulses.

I am not at all concerned to defend our law. I did not make it. If anyone does not like it, let him make an appeal to the proper quarter and get it changed. But before he does so let him consider not alone the accused, but the safety of the community. In our system, the Minister of Justice considers each case on its own merits. He has everyone convicted of murder examined by independent experts, and there never has been a case in which a prisoner has been executed in whom there was real reason to fear insanity or weakness of mind as the actual cause of the crime.

And, finally, the people of Canada would never agree to a change in the law. The defence of insanity has, in my experience and observation, had much more consideration from the judge than from the jury.

Another eminent practitioner asks, "Why has not the doctor the same right as the lawyer to refuse to disclose what his patient tells him?" My answer is: "He has"—and you cannot get up a quarrel with the lawyers or a grievance against them over that.

There is no such thing in our law as a *solicitor's privilege* to refuse to answer questions concerning what his client tells him. What does exist is the privilege of the client, and for the protection of the client, not for the protection, glory or advantage of the solicitor. If the client consent to the disclosure, the solicitor cannot refuse; the rule may be waived by the client, but not by the adviser.

The rule is based on the impossibility of conducting legal business without professional assistance and on the necessity in order to make that assistance effectual, of securing full and unreserved intercourse between the two. It has existed certainly as long as compulsory evidence (say since Queen Elizabeth's time), although for a time the theory seems to have involved a regard for the oath of the lawyer. For a century and a half the reason of the law has always been laid down as I have given it.

But even the privilege of a client does not obtain in all cases. While every communication within the ordinary scope of professional employment is privileged, communications in furtherance of a fraud or crime are not privileged, whether the solicitor is a party to or ignorant of the illegal object.

Moreover, the communication must be made to the solicitor as solicitor. No privilege exists simply because one of the parties is of the legal profession; and, to make it even more clear that it is not the solicitor who has the privilege, let me add that "once privileged always privileged," and nothing the solicitor can do, either by getting rid of his client, taking up cases against him, suing him, or anything else, enables the solicitor to get rid of the privilege of the client.

Do you like that law? or would you prefer to have your lawyer allowed to tell what he has found out from you—perhaps after he has turned against you? This privilege does not in our law exist in the case of any other relation than that of solicitor and client, and another to be mentioned later—"no pledge of privacy or oath of secrecy can avail against demand for the truth in a court of justice"—a communication to a clerk, a trustee, a banker, a journalist, what not, cannot come under the rule as to privilege. Members of a secret society bound by oath

or sacred honor not to disclose what took place in the lodge room have before now been forced to tell in court what took place in their secret chamber.

The privilege also exists in the case of husband and wife. Neither can be obliged to disclose any communication between them during coverture.

Sometimes the privilege is claimed by clergymen, whether they call themselves priests or not. Not infrequently they say that even with the consent of the penitent they would not disclose the confession. Our law knows no such privilege. Nevertheless, when I was at the Bar I never tried to force a clergyman to disclose what was communicated to him by anyone who sought him as a clergyman; and on the Bench I have always advised counsel not to press for an answer against an objection based on religious grounds.

In some countries these communications are privileged in the same way as communications to a solicitor; every country has the law it desires.

There is in our country no such thing as privilege of a medical man to answer any question, any more than any other expert; there is no magic in writing the letters M.D. after one's name.

The claims sometimes made of privilege go much beyond anything found in the case of solicitors. For example, a medical man writes: "A doctor was asked, in the box, 'Did you treat Mr. A. for morphinism?' He refused to answer. Was he right? If not, why are lawyers and priests exempt under similar circumstances?"

These questions indicate a total misunderstanding of the fact; and if medical men, who are supposed to be better educated than the ordinary citizen, believe that such a privilege as is here suggested exists in the lawyer and priest, what must be the opinion of the mass of the people? "For if they do such things in the green tree, what shall be done in the dry?"

I have always said that there is no privilege in the priests; although from the tenderness with which our courts treat all honest religious belief the priest or minister is generally not pressed by counsel. I do not know of any instance in Canada of a priest or minister being committed for contempt. Cases have been known in England, whose courts we generally follow.

Nor would the solicitor be permitted to refuse to answer such a question. The privilege, so-called, does not allow a

solicitor to refuse to answer all questions concerning his client; it extends only to oral and written communications between the client and himself, passing in professional confidence. A question similar to that which the doctor is said to have refused to answer would be, "Did you bring an action for breach of promise for her?" "Did you defend her in a divorce proceedings?" "Did you appear for her in the police court on a charge of indecent conduct?" and the like. No solicitor would venture to refuse to answer such a question; if he did, he would have occasion to repent his temerity behind the bars of the common gaol. The doctor spoken of by my friend was utterly wrong in law—if the fact be exactly stated.

There are many cases of confidential communication between intimate friends, between merchant and banker, master and clerk, in which the person in whom confidence is placed would not voluntarily disclose the secret communicated in confidence. No gentleman would. He may protest against being compelled to do so, even if he is not prepared to go so far as a well-known person of the highest station, who is said, when called as a witness against a lady, to have "perjured himself like a gentleman." A doctor may be in the same position; he often is; and he will naturally feel a repugnance to make known what was told him by a confiding patient. His proper course is to state candidly to the judge his objection and the reason for it. Unless the question is of great moment the judge will advise counsel not to press for an answer. In most instances, indeed, counsel will *proprio motu,* withdraw the question. Not always; you will find an occasional cad even at the Bar.

But if the question be at all crucial the best counsel will, in the interest of his client, require an answer. The judge has no power to do more than advise. The doctor must answer or be committed for contempt.

My friend's doctor was undoubtedly wrong in law, and I should have unhesitatingly sent him to think it over in the seclusion of a cell.

In morals everyone must judge for himself when he will set himself against the law of his country—a law made for him and for me, but made by neither of us. The passive resister of England values the approval of his conscience more than he fears the penalty of the law; there have been and still are many martyrs to what they consider an unjust law; and there may arise cases in which a doctor will feel that as a gentleman he

should rather suffer punishment than betray, even unwillingly, a trust. But he is no different from any other gentleman, and he will have this feeling not because he is a doctor, but because he is a gentleman.

I have been wondering under what circumstances could such a question be asked of a medical man. There are two sets of circumstances under which I can conceive of its being put; first, if the patient were trying to get damages from someone, and her past condition became material. If that was the case, a doctor would be simply dishonest if he helped to conceal the fact. It should not be forgotten that a witness, expert or otherwise, who assists a party—patient or otherwise—to obtain an undue advantage might just as well put his hand in the defendant's pocket and steal the money.

Or the patient may have been a witness, and it became necessary to test how far she was to be relied upon. Her treatment for morphinomania, especially if unsuccessful, would be most material, and should be disclosed. The court is a place where fact is to be inquired into; and, hard as it may be, that a man's—more so a woman's—faults or weaknesses should be laid open, it would be harder if injustice should be done by concealment.

Do medical men really desire the law to be as it is in some jurisdictions—to have a change made in it so that the same rule shall apply to them as to solicitors? If so, the proper course is to apply to the Legislatures.

As a true friend of the medical profession I would give the same advice as that given by *Punch* to those about to marry: "Don't." The privilege, so-called, as I have endeavored to show, is no right given to the solicitor; it is a duty imposed upon him; and, *crede experto,* it is an onerous, disagreeable duty, and one which most solicitors would gladly be rid of if it were consistent with the good of the public. It is no advantage to them, but rather a burden.

It might be well, too, to consider whether the people are so enamoured of the expert evidence of medical men as to be likely to give them a special rank differing from all other expert witnesses—engineers, chemists, scientists of all kinds. (It may not be without interest to know that our lawyers cannot be expert witnesses in our courts. The only experts are the judges who decide the case.)

One set of questions has to do with the law of evidence, a purely legal matter; but as medical men are likely to meet it now and then I deal with it briefly; I mean what are called ante-mortem statements.

The general rule of law is that nothing said out of court by one person can be used as evidence against another; but there are a few exceptions, one of which is that " in trials for murder and manslaughter the dying declaration of the deceased, made under a sense of impending death, are admissible to prove the circumstances of the crime." This has been the law certainly for about two centuries and a half. You will note that the declaration is allowed in evidence (1) only in cases of homicide, (2) only that of the person slain, and (3) of him only when made under a sense of impending death.

When a patient has been assaulted and will probably die, the doctor will be well advised to have a magistrate or other officer of the law sent for, and leave the proceedings in his hands. In the absence of such the doctor should make the patient understand that he will not recover; if possible, obtain from him some acknowledgment of his appreciation of that fact (as any hope of recovery will vitiate the ante-mortem statement); take down in writing what the patient says of the circumstances of the crime, (oral declarations are admissible, but not so effective as written); have him sign if possible, and in any case read the statement to him and procure his assent. It is best to take down all the patient says, no matter how seemingly irrelevant it may be; and it is imperative that the doctor shall assure himself that the patient is *compos mentis*—that he is saying what he means and knows what he is doing.

There is no law to compel a medical man to do anything in the matter, however bad a citizen he might show himself to be by neglecting to do as I have stated.

Most of the other questions may be answered in principle by saying that medical men are members of the body politic, citizens of a free country; they have the same interest in their country and their fellow countrymen as other citizens; they are not members of a caste having special privileges; they have precisely the same rights and duties as others. When I am asked, "Should a doctor do this or do that?" my answer is, " Find out what an honest man sincerely desirous of doing the right thing, sincerely anxious for his country's well-being, influenced by no improper motive or dishonorable intention—what that man would do

in the circumstances, that let the doctor do, and his skirts are clear."

In many cases it is not a matter of law at all, but of prudent conduct and decent regard for others. A married man consults a physician for what is euphemistically called a social disease; should the doctor tell the wife? There is no law as to that; no legal duty cast upon the medical man to keep the secret or to disclose it to the wife. What would an honorable, right feeling man do? Would he allow an innocent woman to become infected with loathsome disease and made an invalid for life (I have seen such), or should he tell what may save her—tell what the husband should himself tell, and would if he were not a selfish hound? I have no answer; the law has no answer. Let each find an answer for himself in his own soul.

Many medical men are troubled as to their duty when they are in the presence of a probable crime.

Let me say at once that in most cases of the kind there is no question of law at all, but a question on the one hand of medical ethics, and on the other hand of the duty every man owes to the society of which he is a member.

Take an example or two:

A doctor sees a man break his leg, and is called on by the man in agony to help him, surgically or otherwise. He may pass by on the other side, like the priest and Levite; he is not answerable to the law. So a medical man may refuse to attend anyone however sick and however willing and able to pay.

A man standing on the wharf sees another's child fall in, which he might easily save by a little effort. The law does not compel him to lift a finger; he may stand and laugh at the child's struggles, ending in death, and he has committed no offence against the law.

Many years ago when representing the Crown in a trial for murder, it was proved that the man, who had been shot, lay all night at a neighbor's gate, that the neighbor heard his shrieks and groans, but did not come near him till the morning, when he found him at the point of death. I diligently examined the authorities in criminal law to see if I could not charge this callous brute with a crime. I could not.

Most cases of the doctor's association with a crime are of the same nature. The law lays no duty upon him—no legal duty, the neglect of which is an offence against the law—let him clear his soul before God and his fellowman.

Again, anyone who knowing a crime to have been committed by another, receives, relieves, comforts or assists the criminal, say, for example, to escape or to evade the pursuit of justice, is guilty of an offence. There is no obligation *in law* on anyone to discover an offence, but if he knows it to have been committed he must walk warily. Mere knowledge is not fatal; some act is necessary, and that act must tend to enable the criminal to elude justice, "must tend to prevent the principal from being brought to justice."

Outside of these offences against the law, the medical man is left to his own conscience. All that was said by the judges in the instances mentioned in the article already spoken of was an expression of opinion not of the legal duty, but the moral duty, the duty as a good citizen, of the medical man. And that every medical man must judge of for himself.

Now let me take some concrete cases proposed for my discussion:

"A man tries to break into a house and is fired upon and wounded; he goes to a doctor's office for treatment and tells how he came by his wound and what he was doing—should the doctor report the case?" I answer that *more Scottico* by another, "A man tries to break into a house and is fired upon and wounded; he goes into a neighbor's house for linen to bind up his wounds, and tells how he came by his wound and what he was doing—should the neighbor report the case?"

"A man is attending a woman who has aborted and is very ill. He suspects criminal interference. Should he go on and treat the case and make no inquiries, or should he try to find out all about how she was operated on and by whom?"

Change the question by saying "friend" instead of "doctor," and find the answer.

Of course the doctor would go on treating the case. If he was prudent he would insist on another medical man being called in; but there is no law to compel him to do anything in the way of finding out the crime, if any. What he will do will depend on his conception of his duty to his country.

I shall at the proper time be very glad to give you my own views of the moral and civic duty of the medical man in such circumstances; but this is not the time. I am discussing "The Law and the Doctor," not "The Doctor's Duty as a Citizen." That duty each must determine for himself. Sometimes it will be hard to say which of two courses is the better; sometimes one would choose the one, while another of equal intelligence, honesty, and patriotism would choose the other."

Miscellaneous

The Sequelae of La Grippe

Among all of the various acute and exhausting illnesses that afflict mankind, there is none that so generally results in distinct prostration as epidemic influenza, or La Grippe. Even the grippal infections which are uncomplicated or unaccompanied by serious organic changes are more than apt to leave the patient in a thoroughly devitalized condition after the acute febrile symptoms have subsided. It is for this reason that the treatment of La Grippe convalescence is of special importance. The anæmic, debilitated, depressed patient requires a systemic "booster" that will not only stimulate but revivify and reconstruct. It is distinctly wise, in such cases, to commence vigorous tonic treatment as early as possible, preferably by means of Pepto-Mangan (Gude), the hæmic builder and general reconstituent. This standard hæmatinic increases the vital elements of the circulating blood and, by increasing the appetite and improving the absorptive and assimilative functions, quickly restores both hæmic and general vitality.

"Doing Nicely"

The *Medical Economist*, August, tells of a man who telephoned daily to inquire of a certain hospital, about the progress of his daughter, who had infantile paralysis. He received the above reply, or some equivalent, each time. Shortly after the last inquiry, he received a notification that his daughter was dying—and at an entirely different hospital.

If our telephone is ever suddenly discontinued, those who try to reach us may conclude with reasonable probability, that some sweet-voiced nurse has told us that a patient—and we naturally do not inquire when we have no proper interest in the case—was "doing nicely," and that the company has removed our instrument because of our remarks. Up to date, we have succeeded in keeping within the bounds of language allowed but we cannot answer for the future. Even the laity are getting to the point where they realize just what "doing nicely" means and those who do not, are very apt to become rude and troublesome when they realize that the speaker, or

Perils of Influenza

The nausea, anorexia, and rapid destruction of body proteins, frequently leading to alarming loss of weight and strength, result in tedious convalescence, and stamp the patient as one requiring the most careful observation and treatment.

The distaste for food renders the diet question of vital importance, as upon proper feeding depends in large measure the success of therapeutic efforts.

In view of the depleted condition of the digestive functions, the food of choice must not only appeal to the appetite, but must be easily digestible and capable of prompt assimilation, to furnish almost immediate nutrition to the weakened tissues.

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the authorities that govern her reply, have not the slightest idea of giving accurate information about a case or of identifying it in any way. And they may become still more rude and troublesome when some such information as the *Medical Economist* mentions, falsifies what they considered an accurate and consoling bulletin of the patient's progress.

It is both the right and the duty of a hospital to guard professional secrets. Reasonable care should be taken to identify a physician or relative or other representative of a patient. Mutual convenience renders it desirable that this care should not be so thorough as to eliminate a telephone entirely for the purpose of securing information of a patient's progress. Common sense dictates that such information should be somewhat more technical in replying to a physician than to a member of the laity. But, one of the courses should be followed: either information should be refused, or it should be given in good faith and accurately.—*Buffalo Medical Journal.*

Current Topics—Education and Venereal Disease

An engrossing interest in one subject always stimulates interest in other spheres of thought. The mind is forced to think, the body to work, and the inevitable result is that a serious attempt is made to solve problems long ignored. To compare great things with small, the world in the stress of combat is taking stock of its responsibilities as an untidy professional man having mislaid a cheque finds that in the search for it he has set his desk in order for the first time for a year. In clubs, streets, the medical press, and even in the lay papers methods for the prevention and cure of venereal disease are being discussed in what our fathers would have characterized as a shameless fashion, and in the process of discussion two good things evolve, first—and a great discovery to some minds—that venereal disease can be discussed by decent people, and second, that the hidden terror when brought to the light of day loses some of its awfulness and does not necessarily imply that its victim is a dissolute, immoral wretch. In time the lay mind may regard the individual afflicted with syphilis as the latter is regarded by his doctor. Is it really right that the man with an alcoholic liver should cast the first stone at the boy with gonorrhœa? Until venereal disease is shorn of its cloak of decency and can be discussed by men and women in the hearing of their

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children, as one may talk of appendicitis, the rising generation will walk in ignorance into its snare. In most of the suggestions for the education of the young in sexual hygiene there is too much "Sunday-school talk." Most youths know their parents too well to accept this with believing ears, and therefore ignore the "tactfully" worded suggestions that physical ills may follow moral delinquencies. It would be better for the parent to say what he means instead of concealing his powder in moral jam. Let every adolescent know that sexual intercourse may result in disease, and what is more, let them know how disease can be prevented. Disease we can prevent, prostitution we cannot.—*The Medical Press.*

Ferrivine and Intraminine in Syphilis

Harrison and Mills (*The London Lancet*), report testing the action of these two agents in three cases of syphilis and to have found them to have entirely failed to cause the spirochætae to disappear from lesions in well marked secondary cases. After this failure to cause their absence from a mucous patch a single dose of salvarsan was successful in eighteen hours. Clinically the authors were unable to detect any influence of either or both of the compounds ferrivine or intraminine on syphilitic lesions, although each was of a variety which heals in a week or ten days and under salvarsan treatment. Their ingestigators also disclosed that both ferrivine and intraminine are extremely unpleasant in their effects; that neither has a specific effect on early syphilis.—*American Medicine.*

Treatment of Dysentery

S. Kartulis (*Journal of Tropical Medicine and Hygiene*), at a recent discussion of the treatment of acute dysentery, held by order of the Director of the Medical Services of the British Mediterranean Expeditionary Force at Alexandria, Egypt, laid stress on the fact that emetine is not able alone to cure all cases, sometimes not acting at all on the amœba in the intestine, even if used repeatedly. Some time ago, Kartulis found that tannic acid, injected subcutaneously in a dose of two c.c. of a twenty per cent. solution, was capable of killing the amœba in the walls of amœbic liver abscesses. Applying this measure later to amœbic dysentery, he found that, in the ab-

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sence of all internal treatment, it caused disappearance of the symptoms and of the amœba from the stools, the results being the same as from emetine injections. Treatment of dysentery by combined emetine injections and tannic acid enemata was then taken up, with excellent results. Kartulis, in an acute case, at once injects one-half grain of emetine intramuscularly, if possible, twice a day. Two enemas of the following composition are ordered taken daily, to be retained fifteen to twenty minutes:

℞ Acidi tannici ..... i (4 grams);
Iodoformi ..... gr. xlv. (3 grams);
Sodii chloridi ..... 3iss (6 grams);
Arrowroot ..... vi (25 grams);
Acquæ destillatæ ..... xxxiv (1000 c.c.).
M. ft. enema.

These enemas are usually well borne. The emetine and enemas are continued for three or four days. In most cases the severe symptoms disappear altogether on the fourth day, and amœba is not to be found. After this the emetine and enemas are given only once daily for a week, and thereafter two or three injections of emetine a week for two or more weeks. As to the diet, on the first two or three days only small amounts of milk diluted with weak tea, or greasy soups prepared with fresh butter, are allowed, together with two to four lemon drinks in the twenty-four hours. On and after the fourth day, macaroni, rice, or arrowroot well boiled in water with fresh butter, once or twice a day, is added, and after a week, light solid food, *e.g.*, chicken or fish. Among some 3,000 cases of amœbic dysentery only four were fatal, and these had received treatment by the old method.

Medicine may have its compensations—the good Lord knows they are needed.

"Terrible war, isn't it?"

"Frightful! Seventh Red Cross dance I've had to go to this week."—*Life.*

Judge: "This man was a stranger to you! Then why did you pick a fight with him?"

Kelly: "All me friends is away on their vacation!"

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increase with the coming of Winter, and suggest, to the Physician of wide experience and success, the important role played in these diseases, of

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German Ravishers and Their Victims

In a thesis for the doctor's degree recently presented to the Paris Faculty of Medicine, M. René Dubois* reported ten cases of French and Belgian women who became pregnant after violation by German soldiers. He admits that, in the circumstances, a rigorous scientific control of the patients' narratives was not possible, but the stories, which were usually very concise, never varied; they did not care to dwell on their experiences, and there was no trace of romancing or of any kind of embroidery. They all had an aspect of deep distress; their restless and frightened look was that of creatures overwhelmed by fate. Professor Pinard, to whom the observations were submitted, thought them worthy of publication. It is impossible to give particulars of all the cases; they are too unpleasant for repetition. A few illustrative instances will suffice. In one case a farm servant in Belgium, aged 18, left her place when the approach of the Germans was announced on August 22nd, and with another girl set off for a neighboring village. They found it in the hands of the Germans, who seized them, crying that they must be their servants and their wives. They were mingled with other captives in an empty house, and when the Germans had inflamed themselves with drink, the girls were, under threats of death, compelled to submit to the ravishers. The girl who is the subject of the report was first the victim of an officer, who then immediately handed her over to a comrade. For three days she was forced to sate the lust of her two masters. On the evening of the third day she managed to escape and found her way to Paris, where she was delivered of a girl in the course of the ninth month after violation. In another case a married woman, aged 28, was captured by Germans with some hundred and fifty other women; each was placed in a pigsty on a bundle of straw. They became the prey of hussars. Those who made any resistance were tied hand and foot, and were "brought to their senses" by blows with the butt end of the rifle or kicks. From December 1st to January 11th the unhappy woman had every day to endure the embraces of eight soldiers. On October 3rd, 1915, she was delivered of a girl. In a third case a married woman, Madame K——, aged 22, belonging to a village in French Lorraine, was with fifty young girls locked up in a barn in March, 1915. They were stripped of their clothing and given over to fifty soldiers. The women who refused had their bellies

*Dix observations obstétricales du temps de guerre: Thèse de Paris. 1916.

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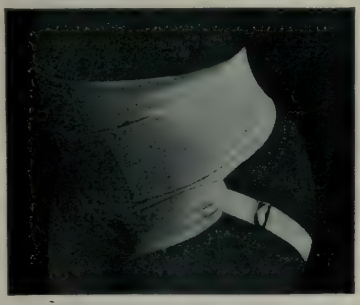

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ripped open; only thirty came out of the barn alive. Madame K—— was delivered of a girl in the following December. Full obstetrical details of all the cases are given. The children—six girls, four boys—were with two exceptions of normal weight. In only one case was the confinement premature. In two cases there was an appreciable prolongation of the period of gestation—in one to 292, in another to 293 days; both the mothers were multiparæ and their menstrual history was regular. While some of the mothers submitted without reluctance to their babes being taken from them, others parted with them very unwillingly. In nearly all the instinct of motherhood was awakened by the first cry of the child. Only a few refused to suckle or even see the child.—*British Medical Journal.*

Fee Splitting

The question of "division of the fee"—called "fee-splitting" by the ignorant and by moral imbeciles who can see only one side of the question, is too large to be discussed here, cuts little or no figure in the matter of organization of this society; but incidentally it may be said that a patient is not deserving of decent treatment if he objects to a specialist's giving the doctor a part of the fee if it is found that the patient is not going to pay his attending physician anything for his loss of time, services and responsibility in making the diagnosis and taking him to a competent specialist in the particular line needed. If the editor of the *Censor* were in danger of being hung for his crimes (which God forbid!) and his lawyer were to tell him that he could be saved by employing ex-Governor Johnson as associate counsel and that the fee for all would be $500.00, would he care how much of the fee friend Johnson got? Or would it be any of his business? Why, then, if a doctor tells him that he is going to die from appendicitis unless a good surgeon is employed, say at $300.00, and his life is thus saved, should he "kick" if the doctor and the surgeon divide the fee to suit themselves, according to the amount of work, responsibility, etc., that each assumes? The American Medical Association and the assinine American College of Surgeons (?) forbid any "division of fee" under any circumstances! Therefore, the members thereof "employ" the doctors who bring patients to them as "assistants" and pay them for their "services" (?). One surgeon of this city, who belongs to both of these hypocritical bodies, boasts that last year he paid $18,000

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to his "assistants." In the Medical Society of the United States each member is allowed to use his common-sense in these matters. The Committee on Admissions tries to recommend for membership only such doctors as are *honest,* and the honest doctor or surgeon needs no "code" to say what shall be to the best interest of doctor and of patient. In medicine as well as business it is now well recognized that honesty is the best policy. As Dr. Bryce says in his admirable essay in this issue of the *Bulletin,* "No code of ethics can turn a bad man into a good one." We try to admit only good men—none other need apply. —*Bulletin of the Medical Society of the United States.*

The English Bulldog

There are certain characteristics, said to be national, which we are fond of exemplifying by anecdotes. Some of these are complimentary, many the reverse. Thus we speak of the pugnacity of the Irish, the economy of the Scot, the vivacity of the Frenchman, and the gallantry of the Spaniard. The English nation takes a secret satisfaction in the tradition which ascribes to her children the quality of bulldog perseverance, the not-knowing-when-you're-beaten spirit, the tenacity which "muddles through" somehow. The soldier imbued with such a spirit would, theoretically at least, be hard to kill, and a communication to a recent number of the *Lancet* seems to bear this out. Dr. Sidney D. Rhind writes in the issue of September 9 of a British soldier who accidentally received two bayonet wounds in the chest while practising with another soldier. When seen, shortly afterward, he was found to have a left-sided pneumothorax with internal hæmorrhage. About four inches of colon and mesentery were protruding from one of the wounds. He was operated on under a general anæsthetic and the abdomen was examined, but no injury to any viscus was found. The operation lasted half an hour, and he survived it six and a half hours; but a remarkable part of the affair was that a postmortem revealed that one of the wounds had gone through the diaphragm into the right ventricle, injuring the septal cusp of the tricuspid valve, and then through the right auricle. Each of these two wounds in the heart would admit an index finger easily. This man, in other words, lived eight and a half hours with two large wounds of the heart, a hæmopneumothorax on one side and a hæmothorax on the other. And during these eight and a half hours he underwent an abdominal section under

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general anæsthesia. No wonder the British don't know when they are beaten. They do not even know when they have been instantly killed.—*Medical Record.*

Vaccine Therapy in Septic Gunshot Wounds

R. H. Jocelyn Swan (*Lancet,* November 18, 1916) reports that in nearly all gunshot wounds there is a multiple infection, but the most constant organisms present are a bacilus of the proteus or colon group, pyogenic cocci of the common types, and one of the anærobic gas forming organisms. On the strength of recent work done by Goadby a mixed vaccine of proteus and streptococci has been used by him in all septic military wounds with the most gratifying results. His present routine is to give a dose of this mixed vaccine in each case without waiting for a bacteriological examination of the tissues. At the same time the wound is freely opened and drained and its bacteriology determined. This latter forms the basis for the future use of vaccines. Those cases operated in without a preliminary dose of this vaccine provided the instances of high post-operative fever, while this occurrence was usually absent in similar cases which had received the vaccine twenty-four to forty-eight hours before operation. The greatest value of the use of the vaccines was found in cases of septic fractures of the long bones, and those which entered joint cavities. Aided by the effects of the appropriate vaccine, it was possible to plate such fractures, or to excise the infected joints with the best of results.—*New York Medical Journal.*

Vaccine Therapy in Gonorrhoea

A. Ravogli (*Ohio State Journal of Medicine,* December, 1916) concludes that: 1. Vaccine therapy for gonorrhœal affections has a value—not absolute, but relative, to its localization and complications. 2. Vaccination alone is not capable to extinguish the process in the urethra, but it may shorten the process if combined with local antigonorrhœal measures. Antigonococcic vaccination seems more active in secondary gonorrhœal localizations. 3. The injections given under the skin or in the muscular masses cause no inconvenience, and the reaction is generally accompanied by fever. 4. The biological reaction and the symptoms following the vaccination have no other diagnostic value, as they are not constantly in accordance with the clinical symptoms.—*New York Medical Journal.*

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Original Communications

HEAT AS A METHOD OF TREATMENT IN SOME FORMS OF CAVITY CARCINOMA*

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We will, first, consider the treatment of cancer of the uterus by the application of a pasteurizing degree of heat applied while the patient is under an anæsthetic, and, second, refer to the possible beneficial results to be obtained by the continuous application of an endurable or supportable degree of temperature in inoperable cavity carcinoma without a general or local anæsthetic.

From the historical viewpoint there are many indications that fire played a most important part in the surgery of primitive man. The records of the past, it is true, are rather shadowy in this, as in other important matters of human effort in the relief of diseased processes; but that fire was used to cut down, or remove, offensive external growths, and to limit the hæmorrhage and do away with the offensive discharge, in addition to cutting off diseased extremities, admits of no contradiction.[1]

Following the irregular and empirical use of the cautery, came the epoch-making work of John Byrne, of Brooklyn, N.Y., where he advocated the excision of the cancerous cervix by the use of the galvano-cautery knife.[2] This cutting operation by heat, it is unnecessary to relate, required a high degree of temperature in the electric knife. It can be stated further and accurately that the Byrne operation was limited to the first

*Read before the meeting of the Ontario Medical Association, Toronto, Canada, May 30 and 31, June 1 and 2, 1916.

stage of cervical cancer involvement, the type of case that is to-day considered suitable for the Reis-Wertheim radical hysterectomy. Byrne did not attempt his technic in the advanced inoperable pelvic cancer patient; the one in which the examining finger, through the vagina, gets the impression that the pelvic basin is filled with cement. Byrne began his galvanocautery excision of the cervix approximately forty-four years ago. His published results have always interested surgeons, and many of them, in a desultory way, have attempted his technic; but none have had either his experience or his successes to record. But out of these unsystematic or irregular attempts to follow the work of the Brooklyn surgeon, especially in the last thirty years, occasional reports would be made of the disappearance of advanced cervical cancer where the cautery had merely been employed to melt down the prolific mass in order to stop the hæmorrhage and the repulsive waste.

It is also of tremendous interest to learn that for some reason, probably unfathomable, the cancer-invaded tissues of this type would heal over, and remain so, and the patient recover. A notable outcome in a case of this character is to be found recorded in one of my first papers,[3] where I reported the results of my first series of cases, thirteen in number. This patient was operated September 21, 1908, and as far as freedom from pelvic or any other ascertainable form of carcinoma is concerned, is to-day in perfect health.[4] This woman's abdomen, however, was not opened, and there was no subsequent treatment.

It was the results in this very extensive and otherwise hopeless type of case that taught me the possibility of a cure from the application of a cauterizing temperature. It may be well to report here also that the great extent of the involvement of the apex of this woman's vagina, with the final favorable results, encouraged me to persist in trying to find a method for the more thorough application of a cauterizing temperature in my future cases, almost regardless of the possible destructive effects on the adjacent normal tissue structures. If the posterior bladder wall, exclusive of the ureteral orifices, or a portion of the anterior wall of the rectum, are involved in the malignant invasion, it is better that these be destroyed with the hope of a future surgical repair, than to leave them uninfluenced by the heat. A colostomy can be made a good substitute for the normal anus, and the upper part of the vagina

can be converted into the lower part of the bladder. The tragedy not infrequent in metastatic cancer of the bladder and rectum is an ascending pyelonephritis. This complication exists either alone or combined in a very large percentage of cases when these patients first present themselves. It is not an uncommon finding for the cystoscope to disclose deformed or infected ureteral openings. This condition cannot be improved by the application of the heat. Indeed, if the carcinoma involves the region immediately adjacent to the ureters, and this area is destroyed by the heat, the problem of repair involves the further danger of deforming the ureteral mouths, or of kinking the ureteral tube when the edges of the fistulous opening are sutured together. It was the recognition of this very real difficulty that suggested the technic referred to above, that of converting the upper part of the vagina into the lower part of the bladder. A vesico-vaginal or a recto-vaginal fistula, whether produced by the cancer or by the heating iron, adds greatly to the ease with which the ureters, pelvis of the kidney, or the kidney proper, may be infected. In my early work, my greatest concern was a postoperative hæmorrhage from the uterine arteries. With the tying of the internal iliacs and both ovarians, this has been eliminated as a source of worry. But a larger experience has developed the fact that a terminal kidney infection, either a nephritis or a pyonephrosis, is a complication that has added to my mortality statistics in a way that cannot be ignored.

I am also convinced that an early prolific cause of these damaged kidneys is a pyometra which so frequently accompanies cervical cancer. The growth blocks the canal, infection of the retained secretions increases, the uterine cavity fills with septic material, and absorption occurs with its varied train of symptoms, *viz.*, cachexia, loss of weight, and general deterioration of health. The patient dies, not from her cancer, but from a general sepsis produced by the mechanical obstruction incident to her malignantly closed cervix. When the heating iron is passed to the fundus of the uterus and the cavity thoroughly sterilized, and natural drainage thus provided for, it is one of the most gratifying experiences in surgery to see these women improve in every way. As a rule, the cachexia disappears within two weeks. If the bladder and rectum have not been opened, the improvement, both local and general, in the great majority of these women, is in every way comparable to the

case of benign obstruction of the stomach after a well-made gastro-enterostomy.

Occasionally, surgeons, in discussing the relative merits of the various recognized surgical procedures for the treatment of cancer of the uterus refer to degrees of malignancy as they are found in the cervix and body of this organ. The inference is almost always drawn that cancer of the body of the uterus and that of the vaginal portion of the cervix, which does not involve the canal, are much less malignant than that form which has its origin within the cervical canal. From the standpoint of pathology, this is true. In another paper[3] I have referred to the practical classification which may be made when these cases are first examined. On the cervix we may have the "vegetative" or "everting" form of growth in contra-distinction to the "infiltrating" or "inverting" form of the disease. This latter is the squamous-cell type of carcinoma of the cervix, which occasionally involves not only the vaginal portion of the cervix, but the general vaginal walls as well. When this occurs, there is not much ocular evidence of its presence, but, digitally, small pearl-like masses can be felt, which develop not only from the surface structures of the vagina, but also from its deeper tissues. It is this infiltrating form that is exceedingly vicious in its tendency to recur, when once its host is disturbed and laid bare by the knife of the surgeon. It is a curious and also an interesting fact that adeno-carcinoma of the body of the uterus seems to be a much less virulent disease than the same cell when at work in the cervical canal. It is also a much more difficult matter to arrest the progress of carcinoma when its greatest activity seems to be at the junction of the body of the uterus with the cervix, the probable explanation, from the anatomical point of view, being the abundance of lymphatics and blood vessels at the cervical neck in comparison with the meagre supply in the body of the uterus. Utero-cervical carcinoma, if it originates in the cervical canal, is difficult to arrest, and when disturbed by the knife of the surgeon also often assumes a rapidity of growth that is remarkable.

But it is not necessary to particularize or specify degrees of malignancy in various forms of cancer when subjected to the usual well-known surgical procedures where the knife is used. The thing that should be emphasized is that no matter where the cancer is located: in the uterine fundus, the cervical

canal, or the everting type on the surface of the cervix, if given time enough, all these various forms of the disease will kill the patient. It is begging the question, as one writer has done recently, to state that seventy-five per cent. of the "fungating" or "everting" type of cervical cancer can be successfully removed by an ordinary hysterectomy and no recurrence follow. You cannot remove any type of pelvic cancer with the cold steel knife, without there being an enormous margin of risk of a recurrence. The steel knife always acts as a mechanical stimulant when it touches a malignant cell-nest, no matter how small or remote it may be from the original focus. To attempt, therefore, a differentiation of the degrees of malignancy, as far as our clinical knowledge of cancer, to-day, is concerned, is useless. Time, alone, is the insistent factor that makes every potentially malignant cell arrive at the same deadly goal.

There is another phase of the pelvic cancer question that I do not believe is sufficiently recognized by surgeons; and that is the slowness with which metastasis appears outside the pelvis in other regions of the body, especially the abdomen. We know that rectal carcinoma in the larger number of cases causes no special discomfort as long as the intestinal tube remains unobstructed, often for years. The pelvic basin will literally hold carcinoma, many times until the whole cavity is tightly packed with the disease, and at post-mortem a thorough search will discover no other malignancy other than in the pelvis. These cases, unoperated, or, if operated with the knife, die, regardless of the type of cell disclosed by the microscope. But if the mass can be heated to a degree which experience, and the laboratory, have shown inhibits the further growth of the disease, an otherwise utterly hopeless case can be brought back into the realm of operability where life can be prolonged in comfort, and frequently saved for an indefinite period.

In a discussion on cancer mestastasis before the American Surgical Association, the late Dr. John B. Murphy[6] referred to the findings in 10,315 post-mortem cases that had died, unoperated, from cancer located in various parts of the body, and stated that in cancer of the cervix and uterus no demonstrable metastasis in glands outside of the pelvis had been found in thirty per cent. of the cases. In other words, a woman can die, unoperated, of cancer of the cervix or uterus, and a scientific post-mortem will disclose no extension of the disease beyond the original focus. Is it at all strange that Murphy should ob-

serve, as he did in that discussion: "Then we may as well ask how many cases can be saved by operation, months, even years, before the dead-house stage of the disease is reached!"

I believe that we are near the time when, as a profession, we must ask ourselves whether we have not been too pessimistic with regard to the possibility of benefiting cancer by treatment. Our attitude is one of chronic doubt, and this is a most unfortunate basis for constructive scientific endeavor in the development of any hopeful form of treatment, whether it be cancer or some other process due to disease. Again, we too frequently give up after the first attempts to obtain benefits seem about to fail. The patient is abandoned to her fate, or else encouraged to take morphine, which means a combined cancer and morphine death. Our pessimism is well reflected by the attitude of the public, who consider the whole question as well settled, and that on the side of utter hopelessness. The treatment of cancer requires an infinite amount of patience in its management, to say nothing of judgment and experience. In addition, the patient, not to mention the surgeon, must be willing, in an advanced case, to stand a lot of grilling disappointment and grief.

So far, we have been considering the application of heat in cancer, only when the patient is under an anæsthetic. General anæsthesia, and its effects on the developing body-resistance to the progress of the cancer mass, already referred to, assumes additional importance from the recent studies of Gaylord[1] of Buffalo. This work seems to show that in the experimental cancer of the laboratory animal there is a distinct lowering of the natural resistance to the growth of cancer after the administration of either ether or chloroform. These studies also seem to demonstrate that the nitrous oxide, oxygen method of anæsthesia does not interfere with the animal's resistance to the inroads of cancer to the same extent that ether or chloroform do. The question of the treatment of cancer by heat, without the patient being under an anæsthetic, gains additional importance again from the studies of both Wassermann and Delbet. Wassermann determined that a mouse, the subject of experimental cancer, if placed in a continuous external temperature of 40.5°C. (105°F.) will show not only an inhibition of its carcinoma growth, but the cancer will gradually disappear. The control animal, on the other hand, will die from the progressive development of the disease. Delbet repeated these observations of Wassermann's, and confirmed them in every particular.

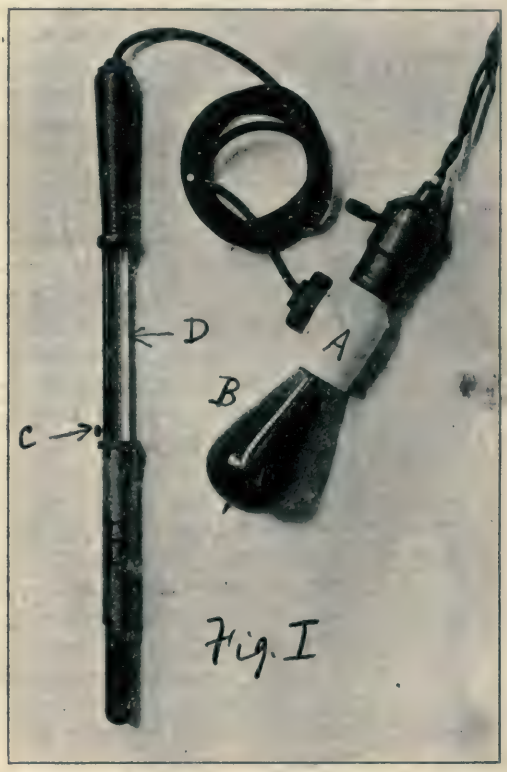
In my studies of the relative values of high or low degrees of heat in the permanent destruction of a mass of cancer, it did

not take long to recognize the fact that a gross mass of cancer could be totally destroyed by the actual cautery; but the important fact remained that the attenuated malignancy outside of the immediate mass was practically not influenced beyond the point of contact with the cautery. The explanation of this is the development of the carbon core from the excessive production of heat in the cautery iron. On the other hand, when a Pasteurizing degree of heat was applied over a period of from forty to sixty minutes, a destruction of the pathological tissue a very considerable distance beyond the direct application of the heat was obtained. The length of time required to obtain the most extensive penetration possible by the low heat in the heating iron is explained by the inhibiting effects of the circulating blood. You cannot get heat penetration in the most effective way until the flow of blood in the parts is arrested. Since tying the internal iliac arteries and both ovarians, the time necessary to get the required degree of heat penetration has been materially shortened.

My experience in the treatment of cancer comprises, first, the cutting or cauterizing temperature. The logical result of this use of the cautery in cancer of the uterus was the production of the carbon core, with a consequent inhibition of further heat penetration. The use of the cautery taught me that heat was the essential thing, and from this grew the experimental[3] work from which I determined the necessary degree of heat by a controllable electric heating iron that would give the greater penetration. The direct effect of this degree of heat was determined by a coagulation of the tissues without the formation of the carbon core. This discovery has been of immense practical value in treating mass-cancer by the dissemination of heat. Both in my own clinic, and in the clinics of other surgeons, this later method added greatly not only to the immediate results, but in the lessening of many disagreeable sequella for the patient, so that the remote results, so far, are such as to lead me to believe that we are in a position to really offer to the patients something that is more than a hope.

The one remaining problem has been that of treating the infiltrating form of the disease where it involved the vagina, and possibly the bladder or rectum. In these locations, mass or bulk as it exists in the uterus, is frequently not present, and the cautery is out of the question, because of its destructive effects. Coagulation, on the other hand, cannot be obtained with a low degree of heat, because there is no mass through

which it can be disseminated. The next problem, then, was to inquire whether it was possible to adapt to the human sufferer from this disease the methods which had been successfully used to destroy the malignant growths of the laboratory animal by the continuous application of a very low degree of heat. Cancer in the vagina, about the vulva, in the anus, and frequently in the rectum and bladder is, as already mentioned, of the same infiltrating type, *i.e.*, it is without bulk, thin, and frequently



spreads over a considerable area. It was necessary to devise a special instrument that was practicable for this treatment. I first tried a small electric lamp pushed into the finger of a rubber glove, and inserted into the vagina. I found that the electric light could not be adapted to this sort of work, because it soon burned out. In addition to this, there was no means of

knowing the degree of temperature that one was getting in the cavity treated.

Without detailing further the various attempts made to find a satisfactory instrument, I will describe the one finally adopted as the most useful. It consists of a series current tap (A) which can be inserted into any electric lamp socket of 110 volts, and on either a direct or alternating current. A carbon lamp (B) of half ampere, with a deep blue glass globe, is part of the outfit. The degree of heat is regulated in the heating iron by a small set screw (C). The degree of temperature, while the instrument is in use, is shown by the thermometer (D). The heat is maintained in the heating iron (E) at the required temperature, automatically, through the series current tap (Fig. 1).

I have stated elsewhere that "A mass of cancer is destroyed when the temperature is raised to 45°C. (113°F.) and maintained for ten minutes." This requires a degree of temperature, however, in the electric heating iron that is beyond the point of toleration of the patient, hence the necessity for an anæsthetic. Without an anæsthetic the vagina gradually establishes a toleration for the heat up to 49°C. to 60°C. (120°F. to 140°F.). In some cases this toleration reaches 71°C. (160°F.), but only after several weeks contact with the heat.

My first case of vaginal carcinoma treated with the continuous application of heat was Mrs. H., age 59, who was referred to me by Dr. J. C. Tritch, of Findley, Ohio. This woman was an utterly hopeless case when she first presented herself for examination, July 24, 1915. Her pelvis was studded with carcinoma, as was also her vagina. She was cachectic, she was in pain, she was hæmorrhaging, and she was also plagued with the usual foul discharge. July 27, 1915, I opened her abdomen, and tied the internal iliacs and both ovarians. The uterus was the size of an ordinary grape fruit, and its serous surface nodular with cancer. The heating iron was passed to the fundus of the uterus and the heat in the shank of the instrument was allowed to play on the vaginal mucosa with the hope of destroying the infiltrating form of the disease which existed there. This woman made a good operative recovery and returned to Ohio to visit friends. I did not see her again until December 30, 1915. At this visit she was free from cachexia and looked good. But her vagina was full of carcinoma down to and involving the vulva. In addition, she had a vesico-vaginal and a recto-vaginal fistula, as well. All the urine and all the bowel movement came through the vulva. I told her that I would

open her abdomen again, and if there was no abdominal metastases I would try to do something for her vaginal carcinoma with its distressing sequelæ. The abdomen was opened for the second time, December 31, 1915.

Absolutely nothing was found that indicated cancer in the pelvis. The uterus was free, it was the size of a small senile organ, and there was nothing to indicate cancer on the serous surface. The upper abdomen was also without evidence of metastasis. With the abdomen free of cancer, I felt warranted in attempting to treat the extensive carcinoma of the vagina by the continuous application of as high a degree of heat as could be well borne without the use of a local or general anæsthetic. It was necessary to use some force in the introduction of the heating iron through the vaginal mass. The heat was maintained at a temperature varying from 48.5°C. to 60°C. (120°F.-140°F) continuously, night and day, except when necessary to empty the vagina of fæcal matter or to allow the patient a little exercise.

The result of the continuous application of the heat in this patient was the gradual disappearance of the mass in the vagina. At the end of six weeks it was possible to insert the largest bivalve duck-bill vaginal speculum. There was no cancer to be found as far as the macroscopic appearance was concerned. The anterior wall of the bladder was gone and the rectal mucosa protruded through the posterior vaginal wall as is common in a left inguinal colostomy. This opening was perfectly clean and healthy looking, as was that into the bladder. Digitally, no palpable masses of cancer could be found. The carcinoma had been cleaned up by the heat in a most remarkable way. The patient, however, was not improving physically. It was evident that she was failing. Palpation of the kidneys developed the fact that they were both enlarged and painful. In other words, she was suffering from a double pyonephrosis. She returned to her friends in Ohio and died in two weeks. A post-mortem was not obtained.

This is not a record of a success, as far as curing the patient. But to me it is the record of a most impressive fact, and that is that the continuous application of a low degree of heat, in one case, converted a vaginal tube, packed with cancer, into one that would admit a large duck-bill vaginal speculum after the heat had been applied continuously, practically, for six weeks. It should be noted that the ureters in this patient were of golf-ball variety, and that they could be catheterized without difficulty through the vaginal speculum.

My second case was Mrs. M., age 63, American, housewife. Four years ago she had a panhysterectomy. As far as could be determined from her history, the operation was done for a suspected beginning malignancy. She did well, physically, until a year ago. At that time she developed frequency of urination, with the accompanying bladder discomfort. There was an offensive, bloody vaginal discharge. Examination showed that there was no cervix and the vault of the vagina was thick and immovable, and ulcerating. Through the cystoscope the anterior and posterior walls were pushed together for a third of the distance. She had consulted a number of surgeons and all had told her that the condition was inoperable. This patient was put to bed and the continuous application of heat commenced, as described in the previous case. The results were not brilliant, but suggestive. All of the subjective symptoms of which she complained, when she first presented herself, gradually disappeared, so that at the end of four weeks she thought she was cured. But I did not encourage further treatment because I could promise no greater improvement than that already received. This was six months ago, and the patient reports that she has had no further return of the distressing symptoms for which she was treated by the heat.

This case illustrates very well the point that I have already referred to, *viz.*, that the circulating blood protects a mass of cancer when it is quite firm, as was true in this case. Again, the heating iron could not be made to penetrate the centre of the mass, as was true in the first case, where the mass of cancer was not so firm but more of the "everting" type, while the second case belonged to the inverting type.

It is probable that in cavity carcinoma, vagina, rectum and bladder, where the walls are thin and the carcinoma of the infiltrating type, *i.e.*, well spread out, that the method just described will be found more effective and less destructive to the normal tissue cells than the coagulating degrees of temperature necessary when the abnormal growth is extensive.

In closing, I want to assure you that I possess no delusions. Neither am I entertaining any illusions regarding the possibility of the work just described with the continuous application of heat proving to be of only more than academic interest. My pleasure this evening is in bringing to you the report of one case where, after using a coagulating degree of temperature, the patient remained free from her pelvic carcinoma for one year, dying, finally, from a double surgical kidney. But before

she died her extensive vaginal carcinoma also disappeared under the use of the continuous application of a low degree of heat, in a way to give us hope, at least, that the type of cavity carcinoma under discussion will become more amenable to the heat treatment when its possibilities are fully developed and understood.

Gentlemen, heat, not fire, will destroy cancer. It merely remains for you and me to work out the great problem of its most efficient application.

References.

1. As a sidelight on this subject, see *Following the Equator*, by Mark Twain, p. 220. American Publishing Co., Hartford, Conn.

2. Dr. John Byrne, *President's Address*, American Gynæcological Society, 1892; *American Journal of Obstetrics and Diseases of Women*, October, 1892, vol. xxvi., p. 575.

3. *Journal American Medical Association*, March 9, 1912, vol. lviii., pp. 696-699.

4. A Method of Applying Heat Both to Inhibit and Destroy Inoperable Carcinoma of the Uterus and Vagina. *Surgery, Gynæcology and Obstetrics*, September, 1913, pp. 371-376.

5. A Method of Applying Heat Both to Inhibit and Destroy Inoperable Carcinoma of the Uterus and Vagina. *Surgery, Gynæcology and Obstetrics*, September, 1913, vol. xvii., No. 3, pp. 371-376.

6. *Transactions American Surgical Association*, 1915, vol. xxxiii., p. 712.

7. *Journal of Cancer Research*, July, 1916, vol. i, No. 3, p. 379.

8. Best Methods of Discouraging the Activity of Inoperable Cancer: A Study of Heat in Cancer. *Journal of the American Medical Association*, May 23, 1914, vol. lxii., pp. 1631-1634.

THE TORONTO RECEPTION HOSPITAL

By Harvey Clare, M.D., Medical Director.

The Reception Hospital was opened in July, 1914, to provide a place where doubtful and incipient mental cases might be received and treated for a short period of time. There had for several years been a constant complaint from the city authorities that many mental cases were being kept in the jail, and from the physicians of Toronto that they had no place of easy access for the quick admission of early mental cases.

During the 1914 session of the local Legislative Assembly, an Act was passed providing for the establishment and maintenance in all cities of 100,000 population of Reception Hospitals. As yet, Toronto is the only city that has taken advantage of this clause in the Act.

As there was no place suitable for the maintenance and care of these patients, temporary quarters were offered by the officials of the General Hospital. We were given the pavilion of the old Toronto General Hospital on Gerrard Street East. This building was not in any way suitable for the care of patients of this type, but it was the intention of the city authorities at that time to provide a suitable hospital as soon as possible. Unfortunately the war broke out within two weeks after we opened our hospital, and since that time it has been useless for us to suggest that the city should at the present time build a new hospital. Again in October, 1915, the Militia authorities required our building for military purposes, and we were compelled to hunt new quarters. An old residence, situated at the rear of Trinity University and known as the Bickford House, was taken and our patients were moved into it. If possible, the accommodation here is worse than in the old pavilion, but we hope that some time arrangements will be made for a new hospital that will be a credit to Toronto.

In nearly all large cities, in both America and Europe, hospitals of this nature have been established. In Boston they have a hospital or psychopathic clinic that cost over $600,000, and a staff of about eight medical men are constantly working in that hospital. In Albany one wing of the General Hospital is devoted to the care of such cases. Detroit also has a hospital

of this nature. New York City has Bellevue Hospital, which provides accommodation for mental cases, until arrangements can be made for their reception into the regular Hospital for the Insane. There is no doubt that institutions of this kind are absolutely necessary, and if any medical man who reads this will look back a few years, he will remember the difficulty that he had in taking care of some mental case, while application was being made and the regular formalities complied with that are necessary before admission to the Hospital for the Insane is secured.

In order to secure the admission of any patient to the Reception Hospital in Toronto, all that is necessary is that the friends or the family physician should bring the patient to the hospital and sign a statement asking us to take care of the patient. In this statement there is a clause giving us the authority to decide whether this patient should be transferred to the Hospital for the Insane or whether he should be sent home.

During the two years that have elapsed since the hospital opened we have admitted 1,306 patients. Four hundred and seventy of these patients have been transferred to the Hospital for the Insane. Some have been sent to the Old Men's Home. Some have been sent to the House of Industry, and some to the House of Providence. Twenty-two have died in the Reception Hospital, and a great many have been allowed to go out from the hospital and secure work when their mental condition was sufficiently improved. Our admission list would have been much larger, and the number sent to the Hospital for the Insane much smaller, had we had the facilities that are provided in a well-equipped hospital. In our present quarters we have no single rooms for the accommodation of special cases. Because of this a great many physicians would not have their patients sent to us. Mild cases of nervous and mental disease frequently object to being placed in a common ward. Another class of patients that we cannot take care of in our hospital is that class suffering from acute excitement. Restless and disturbed patients cannot be treated here, because they interfere with the other patients.

In my opinion, Toronto should have a Reception Hospital that will accommodate about seventy-five patients. It should be so constructed as to give private accommodation for about ten or twelve patients. It should also have a department for

the treatment of restless and noisy patients. There should be a well-equipped laboratory and accommodation for a staff of about thirty people. This hospital should be situated so that the students of the University would have easy access to it. At the present time it is almost impossible to teach anything of mental diseases to the students.

We in this country, who are in touch with this work, look to the Psychopathic Hospital in Boston, the Phipps Institution in Washington, or the Neurological Institute in New York. These hospitals are training and developing men in nervous and mental diseases. Practically all our literature comes from men who work in these places, but in Canada very little has been done along this line. Our hope is that in a short time a new Reception Hospital will be provided and equipped and manned in such a way that nervous and mental cases will have as easy access to this hospital as surgical cases have to the General Hospital, and where these different diseases will be studied as scientifically and thoroughly in Toronto as anywhere else in the world. Our present hospital is a small beginning. Our one resident physician has enlisted. All our male nurses of military age are at present in Europe, and we do not expect to get any more until the war is over.

As Medical Director of the Reception Hospital, I have seen a great many cases of special interest, but have been unable to study them sufficiently satisfactorily or to analyze them in such a way that I would be able to be of greater assistance to the family physician who sent the case to us. We have admitted all sorts of mental cases, including seniles, paretics, dementia præcox cases, manic depressive cases, epileptics, imbeciles, idiots, neurasthenics, melancholias and malingerers. These patients have come from private homes, general hospitals, House of Providence, the Girls' Industrial School, the Boys' Industrial School, the Juvenile Court and the Police Court. And I believe that we have given satisfaction to the friends of most of our patients. Unfortunately there are always cases occurring for whom accommodation should be provided and for which we have not the power to arrange for this accommodation. At the present time I have in the Reception Hospital three feeble-minded women. They have no friends who will take an interest in them or look after them. They are able to work and they are unsuitable for treatment in the Hospital for the Insane. I also have two patients suffering from epilepsy who are abso-

lutely without friends or relatives. These patients have for the past month been quite rational, but I fear to take upon myself the responsibility of turning out an epileptic patient in the winter time who has no money nor friends, and who may within five minutes after leaving our door have an epileptic seizure. Although we have discharged about 800 patients, as yet we have not been criticized because of an accident occurring on account of these patients being discharged. In one case, a man was quite well when he left the hospital in the care of friends; he afterwards escaped from his friends, went to a boarding house, and two months afterwards had a recurrence of his mental symptoms and committed suicide.

I am pleased to have an opportunity of placing the Reception Hospital idea before the readers of this journal, not that we are proud of our present hospital, but we are proud of much of the work that has been done in it, even though our advantages are so limited, and I ask for the interest and the assistance of the physicians of Toronto when the war is over, so that we may have a modern, scientific hospital for the observation and treatment of early mental cases.

Recent Dominion Licentiates.—Dr. R. W. Powell, Registrar of the Medical Council of Canada, announced October 17th that the following, after successfully passing examinations in Montreal, had passed and received the diploma of L.M.C.C.: D. C. Anderson, New York; V. Blackslee, Kingston, Ont.; C. K. Church, Aylmer, Que.; G. F. Downing, Montreal; L. Garaud, Montreal; Gouion, Ottawa; G. Hodge, Cornwall; J. M. F. Malone, Three Rivers, Que.; I. A. MacMurchy, Kearny, Ont.; J. J. Macpherson, Port Daniel, Que.; R. Michaud, Sturgeon Falls, Ont.; C. H. McCreary, Montreal; S. R. Macgregor, New York, N.Y.; R. Olive, New Westminster, B.C.; J. Patterson, Chicago, Ill.; W. L. Stenhouse, Blythe; A. H. J. Tanney, Iroquois, Ont.; W. E. Williams, Montreal.

CAESAREAN SECTION—CLINICAL CASE

By Dr. F. C. Stevenson, Bradford.

Mrs. W. D., pregnant for fourth time; three previous pregnancies terminated at full time, resulted in hard instrumental labors, in each case with a dead child. I attended her in her third confinement, and found her with a small and narrow pelvis. After a long, hard, instrumental labor she was delivered of a dead female infant, weighing only 6 lbs. I then told her and her husband that if she ever became pregnant again I would not attempt to deliver her by the natural way, her convalescence then being slow.

This time I sent her into Barrie Hospital a few days before her expected time, but as she had miscalculated her time she was there for twelve days before labor started, at 6 a.m., December 6th. I was notified at 7 a.m., and reached the hospital a little after 9 a.m. Upon examination found the os well dilated, with the head high up. Judging it to be a fair-sized child, decided to operate. The patient being prepared, Dr. Little gave the anæsthetic, and Dr. Turnbull, of Barrie, assisted me. We began the operation about 10.15, and had the patient back in bed in half an hour, with a living female infant weighing 7 lbs. The liquor amnii was very scanty and as thick as peasoup, and about the same color. The child seemed perfectly healthy when born, but two days later had hæmorrhages from the bowels, which very nearly carried it off. However, two or three days' careful treatment by Dr. Little brought it through.

I have not had any cases of hæmorrhage in new-born infants until this one; but Dr. Little tells me he has had several, and in all cases there had been the same condition of the liquor amnii. He is of the opinion that there must be some infection of the child before birth in connection with that condition of liquor amnii.

At time of writing the mother and child are both doing very well, the former never having had any setback.

Editorials

FOOD CONTROL

We learn by cable despatches from Great Britain that a Bill was introduced in the House of Commons providing for the appointment of a Food Comptroller.

We learn from the *British Medical Journal* that it will be the duty of this new officer to regulate the supply and consumption of food in order to maintain a proper supply, to take steps for encouraging the production of food, to stop waste, to specify the use to which any article can be put, and to regulate its mode of manufacture and sale or distribution. He is to act in regard to the home supply in co-operation with the Board of Agriculture, and as regards foreign supplies with the Wheat and Sugar Commissions. The office will cease to exist twelve months after the conclusion of the war.

Lord Davenport has been appointed the Comptroller. He publicly stated that his first endeavor would be to ascertain what stocks were available and feasible, and then look after their distribution. Many unpatriotic people were getting supplies in excess of their present wants to avoid shortage later, taking sugar as an example, though the income supplies were controlled there was no control at the point of distribution where the retailer and customer met. The use of commodities, which were luxuries, must be abated, such as sugar in extravagant confectionery. A general diminution in the consumption of staple goods was necessary.

The *Journal* explains that, except in the case of sugar and the recent orders about bread making, the only definite indication of any shortage of food has been the rise in price which, since the beginning of the war, has been considerable—perhaps about sixty per cent. (Some say eighty-five per cent.). We learn, however, from private sources that cheap and good meals may still be got in many restaurants in London.

HEALTH MATTERS IN TORONTO

We have pleasure in offering our congratulations to His Worship Mayor Church, of Toronto, on his election by acclamation for the third term. His inaugural address was one of the ablest and most comprehensive that Toronto has known.

He made a short reference to medical inspection, and hoped the City would use every legitimate means to carry out the wishes of the ratepayers in having the medical inspection work in schools transferred from the Board of Education to the Department of Health. He also urged that the powers of the Local Board of Health be transferred to the Board of Control.

He said the City has applied to the Legislature to compel the Toronto Railway Company to build 200 more cars, and also to give the M. O. H. jurisdiction in the matter of overcrowding in the interest of public health.

He also made brief reference to the well-known nuisances in the City, especially the odor from the Morley Avenue Plant and the Abattoirs and other evils arising from the dumping of sewage.

He expressed his greatest appreciation of the work done by the M. O. H. and his Department of Public Health, and said, " Dr. Hastings is the best Health Officer on the continent, in my opinion."

ONTARIO HEALTH OFFICERS

The Ontario Health Officers' Association will meet in Toronto on Tuesday and Wednesday, May 29th-30th, 1917.

As announced in former issues the next meeting of the Ontario Medical Association will be held May 30th, 31st and June 1st, in the Mining Building of the University of Toronto.

This means practically another joint meeting of these two very important organizations. Such union in the last two years has been beneficial to both Societies, but especially to the Ontario Medical. The Health Officers are a very able body of men—second to none other in Canada.

CANADIAN MEDICAL ASSOCIATION

The Executive Council of the C. M. A. has apparently awakened, and decided to hold a meeting this year in Montreal, June 13, 14 and 15. Why no meeting was held in 1916 has been a source of wonder to a great many members.

We are inclined to commend the action of the Executive in its decision to ask the profession in Montreal to take charge of the arrangements.

Many doctors would have favored Ottawa as the place of meeting because it is the Capital of Canada.

While we sympathize with the Ottawa idea we are inclined to think that the meeting this year in Montreal would likely be larger and more successful than we could expect in any other city in the Dominion.

The election of Dr. Blacader as President gives general satisfaction.

THE TORONTO RECEPTION HOSPITAL

We publish in this issue a very interesting and important paper on the Reception Hospital of Toronto, written by Dr. Harvey Clare, the Medical Director. This sort of hospital is not understood as well as it should be by the general profession. This is, we understand, the only one in Canada up to the present time. There are several in the United States, which are said to be doing excellent work—New York City, Albany and Boston—the last of which cost over $600,000.

TONGA

We have received an interesting communication from Dr. H. M. Cowan, Chief Medical Officer of Tongan Government. Tonga, better known to most people as the Friendly Islands or South Sea Islands, is, we understand, the smallest kingdom in the world. These islands, situated in the South Pacific Ocean near Samoa and the Fiji Islands, are 200 in number, with a combined area of only 385 square miles, and a population of about 19,000. The islands were united under one king in 1845 and declared under British protection in 1899.

Dr. Cowan has sent us a copy of a new Health Act

for this kingdom, which came into force in September, 1916.

Without discussing the details of the Act, we may say, in a general way, that it quite equals in its good qualities the best Medical Act in larger countries.

QUEEN'S MEMORANDUM

We publish herewith a very important pronouncement from Queen's University regarding the proposed six years' course in Medicine. It is stated that only two Universities have decided on such a course—and these two have entirely ignored seven other Canadian Universities, several Provincial Medical Boards and the Medical Council of Canada.

This, of course, brings up the question of the comparative merits of the German narrow machine methods and the English broad, reasonable methods. A large number of strong, wealthy Medical Colleges in the United States have been cultivating the German methods for nearly forty years. Toronto and McGill Universities in Canada, after about twenty-five years of consideration and discussion, conducted with frankness and honesty on both sides, have practically adopted the German methods, but not at all unanimously in either case. In Toronto many favored the English methods—probably a majority of the " Final " teachers up to the time when Drs. Temple, Davison, Grasett and Tesky *were allowed* to resign (a most unfortunate thing for the Medical Faculty).

There were two shades of opinion also at McGill. As an instance we may quote from Francis Shepherd,

formerly Dean, who combines science with practice with singular and acknowledged ability. When President of the C. M. A. he stated in his address that:

"In many of our modern hospitals with their laboratories students are not taught to observe so carefully the evident symptoms of disease and are becoming mere mechanics. . . . The higher and more intellectual means of drawing conclusions by inductive reasoning are almost neglected."

The Medical Faculty of Queen's has always been pro-English, and singularly level-headed in her methods of training young men to become broad and useful general practitioners rather than scientists and specialists. The teachers have combined science and practice in a most admirable way. This memorandum explains the situation very clearly from the Queen's point of view.

What does the Western University think about the matter? We shall quote from her Dean, H. A. McCallum, who, as President of the C. M. A., said:

"The Carnegie Foundation authorities have, however, overemphasized the laboratory side of medical instruction. The German method of medical education is to tie the medical student to a microscope, as opposed to the English method of cultivating knowledge through the unaided eye. In Germany the aim is to make scientists first and then doctors; whereas the primary purpose for which students learn science is to become physicians, not scientists. Literature of the several subjects which form the basis of medicine has become so extensive that no man can keep abreast of it. For years American medical teaching has been dominated by the German plan of instruction. In certain quarters there is setting in a reaction. It is claimed that we have become guilty of a fetish worship of laboratories in medical instruction and medical practice."

After explaining certain particulars in connection with the six years' proposal, the memorandum con-

tains seven definite objections which are worthy of careful consideration. We desire to call especial attention to the seventh, which states clearly and truly the financial side. If this extra year is added to the present curriculum it will go a long way towards preventing any but rich men's sons from taking a course in Medicine. We have reason to believe that the majority of the profession, the voters, and the Legislative Assembly of Ontario want nothing of that sort.

THE SIX YEARS' COURSE IN MEDICINE

The following memorandum has been approved by the Senate of Queen's University:—

Queen's University,
Kingston.

December, 1916.

Memo. re Six Year Course in Medicine.

The Universities of Toronto and McGill have announced that, beginning in 1918, a six year academic course will be required to graduate in Medicine. This proposed action has been decided upon after conferences between these two Universities, but apparently without reference, in any way, to others equally interested in medical education in Canada.

There are seven other Canadian Universities engaged in teaching Medicine, and there are the various Provincial Medical Boards and the Medical Council of Canada, all interested in medical education. No opportunity has been afforded any of these to learn the reasons for the action of the two Universities, or to examine or discuss the proposals. The information before Queen's Medical Faculty has been received through letters of enquiry to the Deans of the Medical Faculties of Toronto and McGill Universities. So far as can be learned two reasons are advanced for the change. First, that more time is required for the preliminary sciences which lead to the study of Medicine, and second, that the change will bring

the Medical Course for these Universities in agreement with that recently adopted by the best Universities in the United States. Careful examination of these two statements should be made before accepting the first as correct, or the second as proper and desirable. The Medical Faculty of Queen's University is not convinced of either.

In detail the proposals are as follows:—

"1. That a pre-medical year be added to the five years' course.

"2. That this pre-medical year be taken after matriculation is completed and be devoted to Physics, Chemistry, Biology and one literary subject (French or German).

"3. That the course of instruction shall include:

Physics, 3 lectures and 6 hrs. laboratory work per week.
Chemistry, 3 lectures and 6 hrs. laboratory work per week.
Biology, 3 lectures and 6 hrs. laboratory work per week.
Literary subject (French or German), 4 lectures.
Making a total of 13 lectures and 6 laboratory periods of three hours per week.

"4. That the above course may be taken at any College, University or Collegiate Institute, whose equipment and Staff meet with the approval of Toronto and McGill Universities."

At the present time preliminary education for the medical profession, so far as it is carried on in secondary schools and colleges in Canada, does not differ from that required for other professions. Junior Matriculation for the Universities is the minimum matriculation for entering Medicine. It is now proposed that after this has been completed a "pre-medical year" be devoted to Chemistry, Physics, Biology and French or German. This cannot be done to advantage at any high school, collegiate institute or secondary school in Canada. None of these has the staff or equipment that will warrant eighteen hours of laboratory work per week. Naturally the work indicated will not be the same as that for Senior Matriculation. It will, therefore, become necessary to take the work in the Universities. Now the work is not the same as first year work in Arts, so special classes must be formed to comply with the requirements. This will mean that Medical Faculties will have to make arrangements to supply the "pre-medical year." If the intention is to raise the standard of matriculation for Medicine, why not do so in a manner that would harmonize

with the present work of the secondary schools? That would mean a minimum standard of senior matriculation in place of junior matriculation. The proposals as they stand do not appear to be practical or applicable to present conditions.

It is further proposed:—

"5. That the degree of B.Sc. in medical sciences be given at the end of the second year of the regular Medical Course to those students who, in addition to the regular work of the First and Second Years of the Medical Course, have done special work in one of the subjects of Anatomy, Physiology, or Biological Chemistry, the B.Sc. requirements to be so graded that about fifty per cent. of the candidates may obtain it."

From the point of view of the Medical Faculty of Queen's University, this is a most objectionable proposal. The B.Sc. in Queen's now requires honor matriculation in Mathematics, followed by four years' work. To award this degree in the medical sciences for a "pre-medical year" and two years of University work, would be a complete reversal of the policy the Universities have been pursuing of late years and could not but be regarded as a retrograde step by the Faculty and the Senate. If adopted, this new course would almost certainly displace the B.A., M.D. course of seven years, which is now taken by about twenty per cent. of the medical students in Queen's University. The seven year combined course is regarded here as a most satisfactory course for both general and medical education and its disappearance or displacement must be considered a grave objection to the new scheme.

There are a number of general objections to the proposal:

1. To spend six years with one Faculty in any University appears to be too long.

2. Six years' academic work to acquire the M.D. degree will tend to force graduates into practice at once without serving as hospital internes. Five years' academic work and a year as a hospital interne are certainly preferable to six years' academic work without the hospital experience as a preparation for practice.

3. The addition of a year to the medical course is proposed at a time that is most inopportune. The five year course has not yet been fully worked out even in those colleges which first adopted it. The proposals come at a time when there is an unusual demand for the services of medical men and when the Governments of Great Britain and Canada are asking that

everything possible be done to hasten the graduation of medical students now in attendance at the schools in order that their services may become available for both military and civil needs. The great need for qualified medical men throughout the Empire will not cease the moment the war is over. At the present time the supply of young graduates is inadequate for the needs of Canada; yet the adoption generally of the six year course must have the effect of considerably reducing the supply.

4. Another objection to the proposed change is that it follows the course of development in medical education in the United States, rather than the methods of British schools. There is nothing in the history of medical education in the United States or in its present condition that need be emulated on this side of the line. So far we have followed our own methods and our own ideals and the results have been generally satisfactory to the profession and to the public. It would be most unfortunate now to depart from our own traditions to seek after the illusory paper standards of "Class A. Plus."

5. Further objection to the action of Toronto and McGill Universities is that it has been taken at a time when the matter of medical education is under investigation and review. A Royal Commissioner, appointed by the Ontario Government, is preparing a report which is likely to be comprehensive, and to influence professional and public opinion. The Canada Medical Council is reviewing all matters relating to standards of medical education and examination. An important report has just been issued on the subject of matriculation. Others will be prepared on the subjects of the curriculum and examinations, and time and opportunity should be taken for the study of these.

6. Exception must also be taken to the action of Toronto and McGill Universities without reference to the general body of medical opinion throughout Canada. No attempt has been made towards concerted action by the Universities and Medical Boards. The two largest Universities may ignore all others, as well as all the licensing boards of the country, in a matter of the first and equal importance to all, but the length of the medical course is not a purely academic question. If the largest universities are to be also the leading universities, there are certain obligations resting upon them, not only in their relations to others engaged in similar work, but to the public as well. The question may well be asked, is public opinion

ready to endorse the addition of a year in preparation for admission to the medical profession?

7. Consideration of this important matter is not complete without full details of the financial aspect of it. This is a side upon which the public will properly ask for information. Is the course in Medicine to become so expensive that only those with considerable resources can hope to enter it? At the present time the expense is almost prohibitive for the average working man's son. If another year is added it will be entirely so. A physician graduating in 1891 from Trinity Medical School, in Toronto, gives his total expense, for four years, as $1,240. Another who graduated at Queen's in 1894 spent $1,321 in all. These amounts included college and graduation fees and everything else, books, board, lodging and travelling expenses. From these figures it is evident that twenty years ago a working man, a farmer, or any other man with a modest income, might safely encourage his son to study medicine, confident that with the summer work of the boy to help, the expense could be met. It was also quite possible for an active young man to provide himself with funds sufficient to pay his way. Now the number of self-supporting students has greatly diminished. Some figures have been secured from members of a recent class, graduating after four years at Queen's. Four students, two self-supporting and two not, who kept accurate records, supplied figures from which it has been determined that the average minimum cost of four years at Queen's has risen in recent years to $2,045. To this must now be added the expense of the fifth year, making at least $2,500. If a sixth year is to be required it will increase the minimum expense to $3,000. At Toronto and McGill the college fees and living expenses are considerably higher, and it is estimated that the present five year course cannot be done for less than $3,000. These are startling figures. They mean that the medical profession is no longer open to the class of young men to which reference has been made. There is another aspect of some interest. Twenty-five years ago the medical student paid for his education. All the schools were proprietary schools and none received aid from the Government of the Province. Now all are receiving annual grants from the Provincial Government, so that every taxpayer in the Province of Ontario contributes to the cost of medical education. Will the public and the Government calmly acquiesce in this proposed increase in time and money necessary to gain an entrance to the profession of Medicine?

PORTRAIT OF THOMAS SYDENHAM, PRESENTED TO THE ACADEMY OF MEDICINE, TORONTO, BY DR. J. FERGUSON

In presenting the portrait of Thomas Sydenham, Dr. J. Ferguson, President of the Academy, said that the subject of his remarks was born in 1624 and died in 1689, at the age of 65. He lived in the midst of a very brilliant constellation of men, such as Cromwell, the statesman; Milton, the poet; Newton, the world's greatest mathematician; Dr. John Locke, the founder of the British School of experimental philosophy; Glisson, remembered by his investigations on the liver; William Harvey, the father of physiology; and Richard Wiseman, the first great English surgeon.

Sydenham has been called the Hippocrates, or father of British medicine. He adopted the clinical method in the study of disease. Like Bichat, an eminent French physician, he did not believe in going to books, when nature furnishes one with the original sources of information in the sick themselves. It is for this reason that Sydenham did not read many books, but we are told that he very thoroughly perused the Bible for his religion, Hippocrates for his medicine, Cicero for his Latin, Bacon for his philosophy and Cervantes' "Don Quixote" for his humor.

Sydenham was distinguished above most men for three reasons: he was a notable type of citizen, he was a fearless soldier in the cause of liberty, and he was an ornament for all time to the medical profession. The Royalist trooper, who destroyed Sydenham's home and murdered his mother, young Sydenham pursued throughout the country until he overtook him, and, in single combat, put the ruffian to death.

The portrait you see before you is one hundred and thirty-one years old, and is a copper-plate reproduction of the painting by Mr. Lely, which has always been regarded as the best extant of Sydenham. As you view the portrait you are attracted by the fine brow, the sad but thoughtful eyes, the stoical but kindly mouth, and the face, which is a combination of Cromwellian strength and Miltonic beauty.

As we cast our eyes back over the two hundred and twenty-seven years that separate us from the death of Sydenham, and

recall the man revealed by his portrait, the eulogy of Hamlet over his revered father may fittingly be voiced on this occasion:

> "See what a grace is seated on his brow;
> Hyperion's curls; the front of Jove himself;
> An eye of Mar's, to threaten and command;
> The station of the herald Mercury;
> A combination and a form indeed,
> Where every god did seem to set his seal,
> To give the world assurance of a man."

This portrait shall be one more addition to the *lares et penates* that adorn the walls of our Academy building, and, as we see it, be reminded that still *ut aster inter asteres fulget.*

PROVINCIAL SUPPLY OF ANTITOXIN

The Provincial Board of Health for Ontario will, at the end of the present month, complete a year's contract for the supply of diphtheria antitoxin, tetanus antitoxin, anti-meningitis serum, smallpox vaccine and Pasteur preventive treatment for rabies. These, as well as mixed typhoid and paratyphoid vaccine, are supplied free to the public all over the Province. Diphtheria antitoxin costs the Board 15 cents per 1000 units, in vials, tetanus antitoxin 30 cents per 1000 units, in vials, anti-meningitis serum $1.00 per 20 c.c's, smallpox vaccine 4 cents per capillary tube, and Pasteur treatment $15 per person treated. Mixed typhoid and paratyphoid vaccine is prepared and supplied free by the Board's laboratory in Toronto. The aggregate cost of supplying the Province for the year is about $40,000, or about one-quarter of the cost under commercial prices. All these products except typhoid vaccine are obtained from the University of Toronto, and are prepared at the Connaught antitoxin laboratories about 12 miles outside of the city. Needless to say, the enterprise of the Board is the subject of many appreciative remarks by the public and the medical profession.

COLLEGE OF PHYSICIANS AND SURGEONS GRADUATES

The following candidates have been successful in the examinations of the College of Physicians and Surgeons, December, 1916: James Franklin Adams, Hanover; Frederick G. Banting, Alliston; William W. Barraclough, Toronto; George W. Beaver, Lewiston, N.Y.; Henry Norman Bethune, Charles Noble Black, Toronto; William Albert Blake, Hamilton; Frank Hubert Boone, Toronto; William Easson Brown, Toronto; Charles M. Burroughs, Winnipeg; Gordon Murray Dobbin, Toronto; Thomas Lorne Dobson, Utopia, Ont.; John S. Douglas, Dunnville; Hugh Alexander Elliott, Midland; Charles Farquharson, Agincourt; Douglas Gordon Findlay, Toronto; Donald R. Finlayson, Lucknow; Victor Percy Fleming, Toronto; Charles Elias Frain, Norwich; Ruggles George, Toronto; Joseph A. Gilchrist, Toronto; Roy John Hardstaff, West Devonport, Tasmania, Australia; Frederick W. W. Hipwell, Alliston; Edgar R. Hutchinson, Sarnia; Arthur Isaacson, Toronto; William G. Jamieson, Camborne; Andrew Murray Jeffery, Toronto; Fred Macnab Johnson, St. Thomas; Wilfred J. Johnston, Craigvale; Charles S. Macdougall, Kincardine; Angus MacKay, Woodstock; Robert MacKinlay, Camlachie; Virgil P. MacMahon, St. Catharines; Cecil Vernor Mills, Corunna, Ont.; James Clarence McClelland, Toronto; Emerson C. McFarlane, Stratford; Thomas Vincent Plews, Cobourg; Ernest Aikens Richardson, Toronto; George Raymore Scott, Peterboro; Clarence Morley Sellery, Cobourg; Wilmot E. L. Sparks, Toronto; J. Cameron Smith, Lakefield; William Pelton Tew, Oil Springs; Newton Oscar Thomas, St. Thomas; Charles E. Thompson, Hamilton; Thomas Edmond White, Hamilton; Harvey John Wildfang, Elmwood; Harry C. Robertson, Toronto; Albert Montgomery, Toronto; Beaumont Sandfield Cornell, Athens, Ont.; Donald Stirling MacLennan, Toronto.

News Items

The following appointments were made by the new Toronto council: Governors of the Western Hospital, Aldermen Burgess and McMulken; Director of St. Michael's Hospital, Controller O'Neill.

The Keeley Institute, 1253 Dundas Street, Toronto, closed its doors December 10th. In its busy days the patients had been alcoholics, and went to the Institute for the "gold cure." It is said that prohibition has emptied the place.

The Toronto General Hospital received a cheque for $5,000 from the Gutta Percha Rubber Company of Toronto to endow a cot in memory of the late President of the Company, Captain Trumbull Warren, killed in action at Ypres, April 20, 1915.

From private sources word comes that Dr. James Roberts (Col.), when seen in London, England, early in January looked well, but quite thin, as he had lost thirty pounds in weight during an illness at Salonica. He was, however, very enthusiastic about the good work which had been done in the University Hospital.

More recently it was reported that he was likely to remain in England as chief of a military hospital.

Mr. S. A. Armstrong, for seven years Assistant Provincial Secretary of Ontario, has been appointed Director of Canadian Military Hospitals till the end of the war. His good work in supervising the construction and organization of the Provincial Reformatory at Guelph, and the Hospital for the Insane at Whitby, led the authorities to think that he was exceptionally well fitted for the new post.

That admirable publication, *Interstate Medical Journal*, of St. Louis, Mo., has been purchased by the "Modern Hospital Publishing Company," which means, we are told, that it is now possible to give the profession a strictly ethical journal as regards the advertising pages, and to very considerably improve the quality of the text matter of future issues. With ample capital and complete organization the publishers of the new *Interstate* expect to make it a journal that will merit increased interest and confidence.

Dr. Robert Macgregor, the Canadian physician who was convicted of murder about four years ago, was held in prison until a few weeks ago, when he was released and fully exonerated. He visited his father in London at Christmas time. His friends were pleased to learn that about December 21st he was appointed prison physician at Jackson Penitentiary, Michigan, as an appreciation of his excellent conduct and valuable services in various ways during his incarceration.

The Honorable W. J. Hanna resigned his position as Provincial Secretary and Registrar-General in December. It is generally conceded that he left behind him a record of accomplishments unexcelled by that of any public man in Canada. His work in connection with the Prison Reform and the Welfare of the Feeble-minded has made for him a reputation which has extended over the whole civilized world. Mr. W. D. McPherson, K.C., has been made Provincial Secretary in Mr. Hanna's place. He is well known to possess both energy and ability, and his recent magnificent work as chairman of the Soldiers' Aid Committee has been very greatly appreciated.

Dr. Lounsbury, of Detroit, a Canadian and former resident of Pelee Island, was charged with manslaughter because of the death of Mrs. Kramer, who died after an illegal operation. He admitted the charge and at once pleaded guilty, and was to have received his sentence upon a certain day, but before that date he was seized with pneumonia and died after a short illness. An interesting thing in connection with the case was the presentation of a petition signed by Rev. Gandier and 36 other residents of Pelee Island, where Lounsbury practiced from 1893 to 1902, which read as follows: "On behalf of Harry A. Lounsbury, remembered here for many acts of kindness, and bearing a good reputation, we respectfully beg leniency."

It was generally reported in the newspapers early in January that Dr. H. R. Casgrain (Col.), of Windsor, Ont., would soon be made a Senator. Dr. Casgrain, since the time of the North-West Rebellion, has always taken a deep interest in military matters. He was one of the first of the C.A.M.C. to go overseas, and was for some time in the Island of Lemnos, near Gallipoli, where he had a very serious illness. He was invalided to England, and on his recovery was made C.O. of Bushy Park Hospital, Hampton Court. Madam Casgrain, who has been associated with the Colonel in much of his work, resigned her position in the Daughters of the Empire because she was ordered to take a rest. It was supposed at Christmas time that she would return to Canada before the spring.

Personals

Dr. G. H. Patterson, Odessa, Ont., has joined the Overseas Force.

Dr. Thomas Gibson, of Ottawa, visited Toronto during Christmas week.

Dr. Walter Wright, of Toronto, reached London, England, January 2nd.

Dr. Forbes Godfrey had a serious attack of la grippe, which lasted about three weeks, in January.

Dr. George E. Wilson, 205 Bloor street east, of the University unit, is now on sick leave in Malta.

Dr. D. W. Mackenzie has been appointed urologist to the Royal Victoria Hospital, Montreal.

Dr. John Hunter and Dr. Carolina Brown were elected School Trustees for Toronto on New Year's Day.

Dr. Louise Pennington has been appointed House Surgeon to the Wilfred Hampton Hospital, England.

Dr. C. Carter (Major) has been appointed Director of Medical Services of the Hamilton District.

Dr. Rowland Well, Grand Rapids, Mich., spent a few days during Christmas time visiting his parents in Toronto.

Dr. D. King Smith (Major), of Toronto, after leave of a few weeks, returned to his duties Overseas early in December.

Dr. R. S. Tyrrell, after an absence of some months, returned to his home, 1 Rusholme Road, Toronto, January 2nd.

Dr. T. M. Brandon, who removed from Watford to Alvinston, Ont., has the office formerly occupied by Dr. J. B. Martyn.

Mr. Alex. R. White, formerly Sanitary Inspector for North Bay, has been appointed Provincial Inspector in Mr. Young's place.

The Medical Course has been shortened to four years and eight months in all Australian Universities for the duration of the war.

Major Jno. Amyot has been promoted to the position of Chief Sanitary Advisor of the Canadian Forces in England, Jan. 16th.

A cablegram was received January 16th, stating that Drs. R. J. Wilson and K. C. Cairns (Capts.) had left England for Canada on sick leave.

Lieut.-Col. Geo. D. Farmer, Ancaster, was promoted to Co. No. 2, Stationary Hospital. He went overseas with No. 5 Field Ambulance.

Dr. Jno. W. S. McCullough, C.O.H., Ontario, has quite recovered from the effects of tonsillotomy, December 27th, in the Toronto General Hospital.

News came December 31st that Dr. J. A. Roberts (Col.). of Toronto, and Dr. H. S. Birkett (Col.), of Montreal, were made Companions of the Bath.

Dr. Robt. E. Clapp (Tor. '79), ex-M.P.P., has been appointed Registrar of the Surrogate and County Courts of Bruce County, with his office at Walkerton.

Dr. Geo. Clingan (Lt.-Col.), of Brandon, Man., has been made C.O. of the Canadian Convalescent Hospital at Monks Horton, England.

Dr. H. G. Barrie (Col.), formerly from Peterborough, who graduated M.D. (Trin., '99), was in England before the war. Shortly after war was declared he was C.O. of a Serbian Hospital, and after serving there for a few months he went to China. He is now returning to England.

We are glad to note that our old friend, Dr. J. N. E. Brown, visited Toronto, where he has a large number of warm friends, and spent the Christmas holidays with relatives.

Dr. Harold Ball (Capt.), of Toronto, reached England early in November, and commenced work with the C.A.M.C. under Dr. Wallace Scott (Major) soon after his arrival.

Mr. Geo. E. Young, North Bay, first Provincial Sanitary Inspector, has resigned because of ill-health after eleven years of very active and valuable service, mostly in North Ontario.

Dr. Donald Fraser (Capt.) R.A.M.C., who was at the front in France for some time, returned on leave, January 15th, and spent a couple of weeks at "Highlands," York Mills.

The following have been mentioned in despatches for work done at Saloniki: Col. Jas. Roberts, Lieut.-Cols. W. B. Hendry, E. C. Hart, Major C. H. Morris and Capt. W. A. Clarke.

Dr. C. C. Tatham has been appointed Medical Superintendent of the Strathcona Hospital, Edmonton, which is now controlled by the Military Hospitals Committee.

A cable was received through the Canadian Associated Press, Jan. 17th, stating that Col. Bruce had been made Consulting Surgeon to the British Forces in France under the War Office.

Dr. S. Y. Walsh (Lieut.), who graduated in 1915, worked for some time with the R.A.M.C. in the Dardanelles and Mesopotamia, returned to his home in Toronto on leave early in January.

Dr. P. Shrainka, formerly on the Editorial Staff of the *Interstate Medical Journal,* announces that he will publish a new Journal to be known as *"Medicine and Surgery,"* the first copy to appear in February.

Dr. W. L. Whittemore, grandson of Dr. Oldright, who was awarded the Military Cross, as we before announced, returned to Toronto January 16th. He says he has nearly recovered from his wounds.

The following promotions in the C.A.M.C. have been gazetted: To be Lieut.-Cols., Majors C. L. Starr, G. R. Phillip and D. King Smith; to be Majors, Captains Harley Smith, C. Hunter, T. D. Archibald and T. H. McKillop.

Dr. D. E. Robertson (Capt.), 143 College street, Toronto, who, as before reported, received special mention in despatches, has returned to his home after being at the front most of the time since the commencement of the war.

Dr. R. M. Simpson (Col.), who was honorably acquitted of certain charges in connection with the Kelly investigation, passed through Toronto January 4th on his way back to his old Hospital No. 1, General, at Etaples, France.

Mr. W. F. Nickle, M.P., Kingston, who has rendered valuable assistance in the past in securing hospital quarters for sick and wounded soldiers, has been added to the Canadian Hospitals Commission.

Among the rumors in Toronto about the middle of January it was reported that General Carleton Jones, who resumed his duties as Surgeon-General at the War Office, January 6th, would soon return to Canada to take charge of the Canadian end of the medical services, and that Dr. Foster (Colonel) would take charge of the Canadian services in England.

MARRIAGE

Miss Meta M. Rankin to Dr. C. Stewart Wright, December 19th, 1916, at Coleraine, Co. Derry, Ireland.

Obituary

JAMES DORLAND, M.D.

Dr. J. Dorland died suddenly December 10th at his home in Adolphustown, Ont., aged 66.

MAJOR R. K. KILBORN, M.D.

Dr. R. K. Kilborn died at Kingston, December 3rd. He was for seventeen years Medical Officer of the R. M. College. He was compelled to resign last February on account of ill health.

JOHN EDGAR KING, M.D.

Dr. J. E. King, who graduated from Trinity University in 1893, and practised in Toronto for many years, died December 30th, after an illness of about two years.

JAMES LOUDON, M.A., LL.D.

Dr. Loudon, for many years the distinguished Professor of Physics, and President of the University of Toronto from 1892 to 1906, died at his home, St. George Street, Toronto, on December 29th.

SIR FREDERICK BORDEN, M.D.

Sir Frederick Borden, who was well known as Minister of Militia in the Laurier administration, died at Canning, N.S., January 6th, aged 70. He graduated M.D. from Hoover University in 1868. He was engaged in active practice for many years at Canning. He was a cousin of the present Premier, Sir Robert Borden.

JAMES H. COTTON, M.D.

Dr. J. H. Cotton, one of Toronto's best known physicians, died at his home, 703 Spadina Avenue, January 9th, aged 67.

He graduated M.B., University of Toronto, in 1876, and after post-graduate work in the United States, London and Edinburgh, started practice in Mount Forest, and after doing general practice for a short time he went to New York, where he did further post-graduate work, chiefly in surgery. He commenced practice in Toronto then and soon gained a large practice, which was largely of a surgical nature.

He was engaged in active work until about two years ago, when his health commenced to fail. The immediate cause of death was heart disease.

WALTER BAYNE GEIKIE, M.D., D.C.L., LL.D., F.R.C.S. (Edinburgh).

Dr. W. B. Geikie, of Toronto, the well-known educationist and physician, died at his home, 52 Maitland Street, January 12th, aged 87. He was born in Edinburgh and came out to Canada in his youth. He received his medical education at Jefferson College, Philadelphia, graduating M.D. in 1852.

After graduating he practised for some time at Aurora, in the County of York. He removed to Toronto in 1856. He was made Professor of Medicine, Materia Medica and Midwifery in Victoria University in 1856, and during his long career as a teacher he gave instruction also in anatomy and surgery. He was for many years a member of the active staff and afterwards on the consulting staff of the Toronto General Hospital.

He was practically the founder of Trinity Medical College, of which he was the acting secretary and also the dean for many years. To a large extent the success of this college, as is well known, was due to his great ability and energy. He was strongly opposed to the amalgamation of Trinity Medical College with the Medical Faculty of Toronto University.

We think we are correct in saying that all the former students of Trinity Medical College, living in all parts of the world, knew personally the late Dean Geikie. All admired him, and probably the great majority really loved him.

He retained his remarkable vitality, strength and energy until he was over 80 years of age, and even up to within a few weeks of his death was able to go about the streets of Toronto, sometimes walking and sometimes in the trolley cars.

He was for a number of years one of the most active members of the Ontario Medical Council. The Toronto School of Medicine and Trinity Medical College were keen rivals, and there was sometimes a little feeling of bitterness between these two institutions; but the memory of that has faded away completely, and all classes entertained the most kindly feelings towards Dean Geikie during the last years of his life.

WILLIAM OLDRIGHT, M.A., M.D.

Dr. William Oldright was a man of a very rare and very high type. He was in all respects one of the best men in the medical profession of Canada. We may safely say without fear of contradiction that he was respected and beloved by all who knew him. He was born at St. Kitts, British West Indies, and came to Canada in his early youth. He was educated at the Free Church Academy, Halifax, N.S., the Brantford, Ontario, Grammar School, and the University of Toronto. He graduated B.A., 1863; M.B., 1865; M.A., 1867. He was a member of the Ontario Medical Council 1869-1872. He was appointed Chairman of the Provincial Board of Health in 1882, and remained in that position for several years. He was a member of the corporation of the Toronto School of Medicine, and became Professor of Hygiene in the Medical Faculty of the University of Toronto when re-established in 1887. He was also an Associate Professor of Clinical Surgery and a member of the Senate for several years. He was one of the most active members of the Children's Aid Society, of which he was vice-president for a time.

We regret his death exceedingly. Those who knew him best felt for many long years that as a friend he was ever true, and we believe he was no man's enemy. In short, it is difficult to describe a character such as his because it was so nearly perfect. He was modest, unassuming and thoroughly unselfish. As a physician his first aim was to help his fellow-creatures, and especially those who were poor, to the fullest extent of his ability.

During the last few years of his life his health was not good. He spent a portion of last summer at his Muskoka residence, and appeared fairly well when passing through Toronto on his way to Chicago. He expected to go to St. Kitts for the winter, but rapidly growing weakness detained him in Chicago, where he died at his daughter's residence on January 2nd, 1917.

CLAUDE LAMONT WHEELER, B.A., M.D.

We have to announce with deep regret the death of our dear friend, Dr. Wheeler, Editor of the *New York Medical Journal,* which occurred December 30th, at his residence in Brooklyn, in his 53rd year.

Dr. Wheeler was a Canadian, and very well known, especially in Quebec and Ontario. He was born in Montreal, graduated in Arts from Laval University and in Medicine from McGill University in 1889. After practising a short time in Burlington, Vt., he went to New York, and for several years practised as an eye specialist.

He joined the editorial staff of the New York *Medical Journal* in 1902, and on the death of Dr. Frank Foster in 1911 became the acting editor in conjunction with Dr. Sajous as supervisor.

He had suffered from bronchial asthma, and about a year ago his general health began to fail. He continued work, however, until about a week before his death, when an attack of acute indigestion was followed by broncho-pneumonia, under which he gradually sank until the morning of his death.

Book Reviews

The Biology of Tumors. By C. Mansell Moullin, M.A., M.D. (Oxon.), F.R.C.S., Consulting Surgeon to the London Hospital. H. L. Lewis & Co., Ltd., 136 Gower St., London, W.C. 1916.

Mr. Moullin's views on the origin of tumors are at variance with most other investigators, but he states his opinions clearly and brings forward ample evidence to warrant his conclusions. The volume is small, embodying and amplifying the Bradshaw lectures of 1912. It is well worth the perusal of one who reads along this line.

A Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Medicine, Pharmacy and Dentistry. By W. Simon, Ph.D., M.D., late Professor of Chemistry in the College of Physicians and Surgeons, Baltimore, and in the Baltimore College of Dental Surgery; and Daniel Base, Ph.D., Professor of Chemistry in the Maryland College of Pharmacy, Department of the University of Maryland. Eleventh edition, thoroughly revised. Octavo, 648 pages, with 55 illustrations, one colored spectra plate, and 6 colored plates, representing 48 chemical reactions. Cloth, $3.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

A text-book adapted to medical and dental students is absolutely essential. How well this manual has filled the requirements may be judged from the fact that this is the eleventh edition. Rather extensive changes bring it up to date with the new pharmacopœia, and modern advances in the science. This is one of the most concise and helpful text-books published.

Selections

Radium

The danger of careless and indiscriminate use of an agent as powerful and as capable of profound systemic disturbance as radium is pointed out by Newcomet, who discusses its local and internal uses. No discredit is given to the value of radium products in treatment, but, " like all other materials used in our medical arts, the results are in proportion to the skill employed in their use." Their value as therapeutic agents has by no means been established. In spite of this, they are being employed throughout the country for the relief of distressed individuals by persons having little comprehension of the consequences. Newcomet considers it fortunate that the dosage employed has often been small, and the baneful effects in many cases inconsequential. In these cases, the small doses probably also accounted for failure to obtain expected results. As an argument in favor of establishing a central station for determining the value of radium offered for sale, and as a plea that those using radioactive products should familiarize themselves to some extent with physics, the following incident is related: A dealer had two tubes of radium for sale which he stated had originally been purchased from a well-known chemical house, the price being $400 to $1,400. Tests were made, and it was found that the amount was frightfully small compared with the price asked. The tubes were then sent to Washington where it was determined that the value of the radium in the tubes was 40 cents and $30, respectively.

Among the most encouraging results obtained in treatment by radium are those reported by Burnham and Kelly who are convinced of its great value in cancers of the cervix uteri and vagina, and anticipate even better results as time goes on. Even in those cases that are not cured, improvement is often sufficient to be a great recommendation for its use. Every inoperable cancer of the cervix uteri or vagina, provided general metastasis is not evident, is considered to stand a chance of at least 1 in 4 of cure by radium treatment. Radium and operation in operable cases is believed to hold out great promise of success. Both hysterectomy and radiation are advised in clearly operable cases.

In borderline cases they advise the use of radium as the permanent cures from this group are not great. The authors are emphatic in asserting that radium can and should be used in these cases without any local or general injury to the patient.

Encouraging results from radium treatment of cancer of the pelvic organs are also reported by Schmitz. His conclusions are in part as follows: Inoperable cancers that are not far advanced so that cauterization is not contra-indicated, yield satisfactorily to radium therapy. Advanced, inoperable and recurrent cancers are ordinarily refractory toward the radium rays. Any improvement is at least very temporary. The patients treated with the rays after removal of the organs have done well, although the time elapsed since the treatment averages eight months. Patients suffering from cancer should be treated surgically and then radiologically, and if surgery is contra-indicated they should receive radium treatment which at least relieves the subjective symptoms and often the objective ones. The time elapsed since the commencement of the radium treatment in all the cases enumerated is too short to permit definite opinion as to the remote results of radium treatment. Clinical and histological studies enable us to pronounce the radium rays a valuable addition to the therapy of cancer. It will require years of constant observation to demonstrate such results as anatomic cures. The same measure that is applied to establish the efficacy of surgical procedure in cancer treatment must certainly be employed in radiotherapy.

In the treatment of uterine cancer, Flatau holds the usual position of advocating exclusive radiotherapy. He had done no operation for cancer of the uterine cervix since 1913. The proportionate number of women still living and cured under radiotherapy alone is larger than he could ever report before with abdominal operations for cancer of the cervix. It is claimed to be now beyond question that an incipient cancer focus can be destroyed by radium without leaving a trace. However, certain experiences have suggested the possibility that although the primary focus may thus vanish and leave no trace behind, metastases develop at remote points, far beyond the scope of rays. Time alone can tell whether radiotherapy will oust surgery from the arena of treatment.

In discussing radium, Moriarta emphasizes the fact that the gamma rays are the ones most valuable therapeutically, and

in treatment, our problem is to get the greatest amount of these rays in any given place. This will depend upon the intensity (amount of radium used), the manner of filtration, and the period of time of exposure. The intensity of an application is greatly augmented by what is termed "cross-firing," that is, the focusing of gamma rays from several sources upon a given district. The burying of a tube will also increase its efficiency many times. Moriarta presents a glowing description of the values of radium in treatment. Anæmia, metabolic processes, the elimination of carbon dioxide, urea and uric acid, the diminution of the viscosity of the blood, the increase in urinary secretion, improvement in appetite and digestion, relief of gouty manifestations and neuritis, the lowering of blood pressure, are among the conditions which he claims may be greatly and favorably influenced by radium treatment.—*Progressive Medicine*, December 1, 1916.

War Diet and Eclampsia

Warnekros refers to an article by Mayer on the marked falling off of eclampsia at the Tübingen clinic since the outbreak of the war. The same coincidence has been noted at the Berlin clinic. Mayer's hypothesis is bound up in the possibility that the disease in question may have been aggravated by "supersaturation" of the female organism with the male fertilizing principle, a factor largely eliminated by protracted absence of the men at the fighting front. At Berlin, on the contrary, the spare war diet is believed to have brought about the lowered incidence. Especially is the diet poor in protein and fat so that a minimum of work is thrown on the liver and kidneys. Bumm has noted independently that strong, hearty women are more likely to suffer from the disease that the opposite type and that eclampsia is much more common in northern than in southern latitudes, a fact which he explains by the relatively spare diets in the latter, which contain as a rule less protein and fat. Even in Switzerland eclampsia is far less prevalent than in Finland. French authorities note its comparative infrequency in Algiers. The cold weather months and urban life, in as far as they tend to cause extra consumption of meat and fat, favor the development of the disease. This view meets with a check through the claim that there has been an increase of nephritis as a result of the war diet; but nephritis is now

regarded as essentially due to infection, and the increased morbidity from this affection is due largely to trench life at the front. The so-called pregnancy kidney, or pregnancy nephritis, shows the same lowered incidence as eclampsia. Not only is the disease less frequent, it also pursues a milder course. Not only is the percentage of eclampsia in clinics on the decline but the percentage of fatalities is showing a corresponding decrease. A recent case is cited in which a 29-year-old tripara developed marked œdema in the face and extremities, with vertigo, headache, and visual disturbance. She was only 7 months pregnant but her urine contained 12 per 1000 albumin and was scanty. She had not been stinted as to diet for her parents were in the provision business and she ate at will of meats and sausage. She also ate very much butter, because her husband was a war invalid and diabetic and possessed no less than six butter cards. The war lessons are sufficiently obvious for peace times. In future when the gravida reaches the sixth month of gestation a prophylactic regimen will be instituted and the disease incidence will be greatly reduced. The first convulsion means that in one case out of twenty the liver and kidneys are already hopelessly damaged. Many lives are saved only as a result of desperate surgery while with symptomatic treatment we can never feel any confidence as to the outcome.—*Medical Record.*

Remissions in Leukaemia Successfully produced by Radium

Dr. Thomas Ordway, of Albany, stated that a certain group of leukæmia cases were resistant to X-ray and to benzol. Refractory cases might yield to radium therapy and details of a case treated by radium were given, including charts showing analysis of blood changes. Radium was applied systematically according to a plotted chart corresponding to the surface outline of the spleen. The results were a remarkable improvement of the blood picture; reduction of the spleen to normal; and great improvement of the patient's general condition.—*N. Y. Medical Journal.*

Defective Children

are only too often found to be tea or coffee users. One observer recently revealed the fact that in the history of one thousand mentally defective children investigated, over nine hundred were taking on an average of three cups of tea or coffee daily. Some were taking as many as ten cups in twenty-four hours.

Chronic caffein toxemia plays havoc enough in adults, but the damage to young tissues is vastly greater.

That mental deficiency (usually associated with poor nutrition) is in many instances the outcome of chronic poisoning with caffein-containing beverages is now recognized by many school authorities everywhere.

The use of tea and coffee by children should be discouraged.

Instant Postum

will be found a pleasant revelation to all concerned.

It is made of whole wheat skilfully roasted with a small quantity of molasses, it contains no caffein or other drugs.

Postum resembles high-grade Java coffee in appearance, has fine aroma and taste, and it is not only delicious, but also possesses valuable food properties.

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The ***Clinical Record,*** for Physician's bedside use, together with samples of **Instant Postum, Grape-Nuts** and **New Post Toasties** for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

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Miscellaneous

The Pneumonia Convalescent

In spite of all of the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious diseases, acute lobar pneumonia still deserves the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the fall and winter months, many cases of the lobular or irregular pneumonia that so often complicates or follows la grippe. When this condition supervenes it is more than likely to follow a subacute or chronic course and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Peptomangan (gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a true tono-stimulant to the organism generally. As Peptomangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the pneumonia of the aged.

Two Strengths of Pituitrin

As is well known to medical practitioners, Parke, Davis & Co., have for several years manufactured a standard pituitary extract under the name of "Pituitrin." The product is prepared from the posterior lobe of the pituitary gland, and has come into extensive use in the treatment of delayed parturition or uterine inertia. Being specificially intended for use in obstetrical work, this preparation will hereafter be designated, in label and literature, as Pituitrin "O" (Pituitrin obstetrical).

Announcement is now made of a second preparation of the pituitary gland, to be known as Pituitrin "S" (Pituitrin surgical). This product is approximately twice the strength of the former and is indicated specifically in the treatment of post-operative intestinal paresis, vesical atony, hæmorrhage and shock. Because of its exceptional potency it should not be used in obstetrical practice. In order that it may be readily dis-

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MEDICAL COUNCIL *of* CANADA

June Examinations, 1917

The Spring examinations of the Medical Council of Canada will be held at Toronto and Winnipeg, on June 19th, 1917.

Forms of certificate may be obtained from the Registrar at any time.

Registration for the June Examination will close promptly at the Registrar's Office in Ottawa, on May 22nd, 1917.

R. W. POWELL, M.D., Registrar, 180 Cooper St., Ottawa

tinguished from Pituitrin "O" (obstetrical) the carton labels are printed with red letters on white paper.

Both Pituitrin "O" and Pituitrin "S" are physiologically tested for activity.

Pituitrin "O" is supplied in ampoules of 1 mil (1 Cc.) and ½ mil (½ Cc.) respectively, and in bottles of ½ ounce. Pituitrin "S" is supplied in ampoules of 1 mil (1 Cc.) only.

Phylacogens in Small Bulbs

Formerly the six preparations constituting the phylacogen line were supplied in 10-mil (10 Cc.) bulbs only. A considerable demand has developed for a smaller package. To meet it the manufacturers (Parke, Davis & Co.) announce the addition of a 1-mil (1 Cc.) bulb. Each bulb is enclosed in a pasteboard carton, and is accompanied by a descriptive circular. These small bulbs are marketed in packages of five, which enables the druggist to supply the physician with one to five bulbs, as may be wanted. The 10-mil bulbs, in individual cartons, will be marketed as heretofore. It is confidently believed that the two packages now furnished will meet every demand of the medical profession.

Opium and Peritonitis

Most medical men who graduated from thirty to forty years ago will recall the fact that their teachers in surgery, medicine, and therapeutics were insistent upon the value of opium in the treatment of peritonitis, and this was particularly true in the Philadelphia and New York schools, largely through the influence of Dr. Alonzo Clark, who gave opium for effect and without regard to the number of grains.

With the discovery that peritonitis is always the result of an infection, and usually a localized infection at its beginning, the attention of physicians and surgeons was called to the value of operative interference, and instead of administering opium in peritonitis, with or without operation, the surgeons went to the other extreme and strongly advocated the use of saline cathartics with the idea of depleting the intestinal peritoneum. With the discovery that this method of treatment did no good and that the caput coli in cases of appendicitis was never loaded with

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fæces and therefore did not need a purge, this plan was also pushed aside.

Attention was now directed to the flow of lymph as a means of disseminating infection or of enabling the patient to combat his disease, and simultaneously the method of treating peritonitis by means of the rectal drip was introduced, universally recognized as of value in suitable cases, and now widely resorted to. Indeed, its use has become so popular that this method is probably employed in many cases in which it is not needed, or in which it causes unnecessary discomfort.

The object of this editorial, however, is to deal with an interesting phase of this subject which is well worthy of our attention. We have heard skilful surgeons make the public statement that he who followed the method of giving opium in peritonitis was guilty of malpractice. We have also heard others state, with equal positiveness, that he who did not give saline purges in peritonitis was equally guilty; but, with the whirligig of time, Crile now comes forward with a strong endorsement of opium, stating that the common cause of death in peritonitis, as in any acute infection, is exhaustion, which exhaustion is due to the expenditure of energy in combating the infection; the destructive effects of the resulting acid by-products; the diminished intake of food; and insufficient sleep. He emphasizes the latter factor, since in peritonitis the pain is severe, and in the acute types sleep is rare and fitful. He therefore advocates, for the purpose of diminishing the absorption of poisons and affording drainage, operating under nitrous oxide and local anæsthesia combined, placing the patient in the Fowler position and giving physiological rest to the intestine. In order that the latter may be obtained, he advises the free use of opium, and thoroughly endorses Alonzo Clark's original statement that the dose should be measured by its effect upon the respiratory rate and not in grains. Crile also points out that this treatment, if properly pushed until the respirations are markedly slowed, may, by reason of the relaxation of the facial muscles, mislead the physician in thinking that his patient is worse when he is really better. He asserts that laboratory findings have demonstrated that opium protects the brain, the adrenals, and the liver against the damaging effects of toxin, and he publishes a plate showing photomicrographs of these organs exposed to infection with and without opium.

The Fatal Event In Pneumonia

is due either to a gradual toxemia or to a mechanical interference with respiration and circulation. (Osler).

ANY remedial agent that hastens the elimination of the toxins—that relieves the dyspnoea, cyanosis, and tends to restore normal circulation — is clearly indicated.

ANTIPHLOGISTINE applied hot over the entire chest wall, increases the superficial circulation and by its hygroscopic, depleting and osmotic action, hastens the elimination of toxins. By increasing the capillary circulation the right heart is relieved; the dyspnoea and cyanosis rapidly disappear.

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The use of opium also diminishes the need of food in that it diminishes metabolism.

Finally, Crile publishes a plate illustrating, as he thinks, the difference in the appearance of the brain cells with and without sleep after they have been exposed to a toxic agent.

Whether these plates will be universally accepted, as representing the real conditions of important organs, by those who are most competent to study them, we do not know. The point is that clinicians of forty or fifty years ago, while they may not have been able to explain the results which they achieved by heroic medication, nevertheless were seemingly accurate in the deductions which they made. At times the laboratory investigator, the newly-fledged doctor, and the seeker after novelty are prone to ridicule methods of treatment for which there seems to be no scientific explanation, as determined by laboratory research. This has been so in the case of alcohol, where, as we have pointed out before, the belief that it acted as a stimulant was erroneous, but the observation that it did good in certain cases of disease was correct, and, therefore, laboratory experiments upon healthy men and healthy animals, which seem to indicate that alcohol was always harmful in the course of infectious diseases, while valuable in themselves, in no way prove that the observations of an immense number of clinicians to the contrary are in error.—*Therapeutic Gazette.*

Is Graves' Disease of Neurogenic Origin?

If it can be shown that this affection is not of endocrine origin, the entire fabric of endocrinology might require revision. Moebius is credited with the discovery that Graves' disease is simply hyperthyroidism; while Oswald holds the view that the neurogenic factor is paramount, and that the malady never develops in one with a sound nervous system. The thyroid lesion is the result of an emotional or psychic insult, and is a mere epiphenomenon. A writer in *Il Policlinico* for Dec. 3, cites some experiences of Rothacker during 1916, which bear out the neurogenic theory. He had under treatment six patients with Graves' disease, in which recognition and removal of the neurotic element led to a complete cure. Moreover, among the troops it is not unusual to see healthy recruits who are already suffering from physical and psychic overstrain develop under

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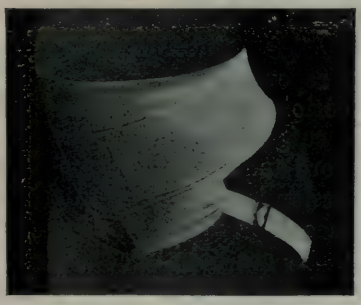

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strong emotions a certain abnormal action of the heart of functional origin. It is quite possible that this manifestation is often but a part of the Graves syndrome, and that a careful study of such cases would reveal the presence, sooner or later, of enlarged thyroid and exophthalmic goitre.—*Medical Record.*

The French Treatment of Burns

The daily press and certain medical reports from the European fighting front have frequently mentioned a new and successful treatment of burns by French surgeons. Since the special dressing was known by a coined word and since its composition was not definitely stated, the profession has been awaiting an official description. In the first place it is not very new, since its employment goes back to 1904. It has been in use in the present war almost from the outset, but has only recently come into anything like general employment. It consists of a mixture of paraffin and resin, and while no chemical change is set up it possesses peculiar physical properties which make it available for the treatment of burns.

In the *Archives de médecine et de pharmacie militaires* for August Dr. Barthe de Sanfort reported over 300 burns in soldiers treated with the remedy, which is described in detail. The name "ambrine," with which it was christened, comes from its amber hue, and seems to be purely descriptive. This surgeon states that he first devised the formula in 1904. Toussaint used it in 1907 in the Military Hospital at Lille, while another colleague, Michaux, has also had long experiences with it. Recently Kirmisson presented some patients before the Société de Chirurgie in which the remarkably favorable action was well demonstrated.

The substance is a solid which fuses at about 50° C. and may be sterilized by boiling without injury. It is applied hot (at 70° C.—158° F.), causing no pain whatever, and even after twenty-four hours is still warmer than the body. The favorable action is due in part to local hyperthermia. Occurring as it does in cakes of paraffin consistency it is broken up into bits of various size, heated to 125° C. (257° F.) and then cooled to 70° C. (158 F.), the temperature of application. Its use is not confined to burns, for it is excellent in freezes and is even superior in the treatment of certain wounds. It is first applied in very small quantities with formation of a thin pellicle. Over

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this is placed a very thin layer of cotton, which is followed by more of the remedy. This simple dressing is painless and inexpensive. It is removed in twenty-four hours and comes away *en masse* and without pain. It is true that considerable pus, often of foul odor, is found beneath. This, together with loose sloughs, is carefully wiped off and the surface dried with a hot air douche. The dressing is then reapplied. In no type of burn is it contra-indicated. In general, rapid healing takes place with superior end results.—*Medical Record.*

Radium, a Palliative

Dr. Douglas C. Moriarta, of Saratoga Springs, N.Y., stated that radium possessed a power to correct the disagreeable odor which accompanied the breaking down of cancerous tissue. This was a very great boon to the patient as well as to the members of the household. Further, radium controlled hæmorrhage. In six cases in which he used radium pain was relieved, the odor was markedly controlled, hæmorrhage ceased, and there was a change in or a disappearance of the local pathological tissues. Two patients died in coma two months after the treatment; four were alive and hopeful. In one case, Case 5, the uterine hæmorrhage was not of cancerous origin, but the condition was a terminal one. He was sure the patient would have died had it not been for radium. He was aware that these six cases were not sufficient from which to draw definite conclusions, but nearly every worker with radium made the same statement concerning its value in the relief of pain, hæmorrhage, and odor, but without emphasizing the relation of its use in this particular field.

In using radium in these cases he believed it was possible to produce a toxæmia which might prove fatal, and he was sure he had seen the end hastened in this way. He would suggest two precautions when applying radium locally: first, a patient with a low leucocyte count should not be given prolonged applications of radium; and, second, when radium was used it should be accompanied by the liberal use of alkalies. He emphasized his belief that no case of this type was so desperate, and no post-operative condition so hopeless, that radium might not be used with an expectation of the alleviation of the distressing symptoms.—*N. Y. Medical Journal.*

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Acetophen, the antipyretic, analgesic, antiseptic, exempt from the war tax by the Government, as identical with the German product Aspirin, is being manufactured in Canada by Charles E. Frosst & Co. This would indicate that "Made in Canada" shows progress in the chemical line. Acetophen is supplied in 5, 7½ and 10 gr. disintegrating tablets, as well as powder form.

Prescribing Note—Argol and Iodine

W. J. Robinson (*Critic and Guide*) instances the case of a physician who knowing that to paint a sore throat with iodine was a good procedure, and that painting with argyrol was equally so, wished to get the benefit of both drugs, and prescribed a throat-paint containing argyrol, potassium iodide, iodine, and water. The result was that the throat became intensely inflamed and irritated. The reason is easy to understand; the argyrol is completely destroyed as argyrol, silver iodide being formed, which in more or less strong solution is extremely irritating, and instead of soothing an inflamed mucous membrane will increase the inflammation.—*The Prescriber.*

"A Germ of Death"—A Parody

(*"Psalm of Life"—Longfellow.*)

Tell me now, why countless numbers,
  Germs by millions, live to dream
In cesspools, where in slumbers
  Lurks death, though friends they seem.

Germs are real! Germs are earnest!
  And the grave they'll make our goal;
Germs are dust, with filth returnest
  With a warrant for the soul.

Not enjoyment, but germs of sorrow
  Is our microbed end and way,
Let us act to rid to-morrow
  Of the pitfalls of to-day.

War has rendered hundreds of

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Germs keep pace, while time is fleeting,
They are valiant, vile and brave,
Some have drum-sticks and are beating
Germicidal marches to the grave.

In the cesspool germs drill for battle,
Bivouac in the filth of life;
They are small, but strong like cattle,
Yoked together for the strife.

Trust no microbe, howe'er pleasant,
But spray the foe till he is dead;
Spray, spray in the living present
Germs within and germs o'erhead.

Lives of microbes here remind us,
That they can blight our lives sublime,
And tormenting, kill and bind us,
And bury in the sands of time.

Sprint up! then, perhaps another,
Sailing o'er life's germy main,
A forlorn and germ-wrecked brother,
Spraying, shall take heart again.

Let us then, the germs outdoing,
With a CLEAN UP, for his fate,
Still with germicides pursuing,
Learn to CLEAN UP while you wait.

—*C. C. Morris, M.D., The Journal of the Indiana State Medical Association.*

A well known tooth paste business was sold last week to a British purchaser for three thousand pounds (£3,000). On the other hand a well known brand of German eye-wash, which was offered simultaneously in all the allied capitals, failed to secure a single nibble.—*Punch.*

An alarming increase in juvenile crime in Germany has led the authorities to appeal to parents and guardians to keep a sharper control over their young, and it is understood that Little Willie is likely to be recalled to the parental circle.—*Punch.*

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Original Communications

THE WORK OF THE ANTITOXIN LABORATORY

By J. G. Fitzgerald, M.D.

Associate Professor of Hygiene, Director of Antitoxin Laboratory, University of Toronto.

Previous to May, 1914, with the exception of smallpox and typhoid vaccines, none of the auxiliary weapons, of a preventive or curative nature, in the fight against communicable diseases (diphtheria, meningitis, etc.), were prepared in Canada.

This condition of affairs was not desirable, and various medical organizations had urged the Federal Government to establish a laboratory for the preparation of these biological products. It was further suggested that these products be distributed throughout Canada, free of charge, or at a nominal cost. No action of any sort, governmental or private, was taken until 1914.

During the winter of 1914, the writer, with the very cordial and hearty co-operation of Sir Edmund Osler, chairman of the Medical section of the Commission of Conservation and a Governor of the University of Toronto, undertook to establish a laboratory in the University of Toronto where these products could be prepared and distributed at cost. In May, 1914, the laboratory was formally opened. At that time very modest and very limited accommodation was available, but better times were to come.

It may be wondered why it was desirable to establish such a laboratory, if these products could be freely imported from the Mother Country or from the United States. The important reasons were three in number. First, no country in the world

of the size of Canada is without laboratories for the purpose. Second, the supply of a given product at any time might be insufficient; the outbreak of war in August, 1914, and the consequent great shortage of tetanus (lockjaw) serum illustrated this point. Third, there was the economic reason.

The preparation of these substances requires the services of trained experts. Few such men are obtainable. Then the equipment of laboratories, stables, etc., is costly, and the profits of producers, middlemen and retailers meant that the antitoxin when purchased by the ultimate consumer was expensive. The entire success of treating diphtheria with antitoxin depends upon the early use of large doses. The use of diphtheria antitoxin in this way in New York State, has reduced the death rate, from diphtheria, from 99 per 100,000 in 1894 to 20 per 100,000 in 1914. The remedy was known, but was not always available.

Immediately the Antitoxin Laboratory began the distribution of its products, a dose of antitoxin was made available for thirty-five cents, which previously had cost one dollar, and the dose which had been sold for from three to five dollars could be purchased for one dollar and a half. The enterprise at once received every encouragement from several Provincial and Municipal Boards of Health. The first of these was the Provincial Board of Health of Ontario, which, through its Chief Officer of Health, Major J. W. S. McCullough, arranged for distribution through all local Boards of Health in Ontario of various antitoxins and serums at these greatly reduced prices. Dr. M. M. Seymour, Commissioner of Health for Saskatchewan, and Dr. W. H. Hattie, Provincial Health Officer of Nova Scotia, did likewise for their provinces. Several other provincial and local Boards of Health announced their intention of supporting the Laboratory and soon the movement became national in scope.

The next step in the work was the very advanced action of the Provincial Board of Health of Ontario when they decided, commencing February 1st, 1916, to distribute free of charge in Ontario, diphtheria antitoxin, tetanus antitoxin, meningitis serum, rabies vaccine (the Pasteur treatment) and smallpox vaccine. This move put Ontario in the forefront of public health work, and meant that henceforth no child's life should be lost because the parents could not afford to buy antitoxin. No other movement in public health work in Canada within the past decade has received such general endorsation as has

this action on the part of the Provincial Board of Health of Ontario.

To keep pace with the work in the preparation of smallpox vaccine, the Antitoxin Laboratory in January, 1916, acquired the plant and good-will of the Ontario Vaccine Farm, Palmerston, from Dr. Coleman.

Meanwhile with the outbreak of war the work of the Antitoxin Laboratory was greatly increased. After war was declared there was a great shortage in the world's supply of tetanus antitoxin. This was due to the fact that enormous quantities were required in the Western theatre of war. Within the first three months of the war, there were a great many deaths amongst the wounded from lockjaw. The medical authorities of the various armies decided that in future all wounded men were to receive a protective dose of tetanus serum. Immediately there was a cessation in the number of cases of tetanus observed, and deaths from this dread disease, amongst those injected, became a rarity. To accomplish this, enormous quantities of tetanus antitoxin were required, and an acute shortage soon occurred.

At this juncture, in the early spring of 1915, the Canadian Red Cross Society had been urgently requested to obtain ten thousand doses of the antitoxin to send to France. They endeavored to do so, and found that the lowest price at which the serum could be obtained from any manufacturer in the United States was one dollar and twenty-five cents a package. This came to the attention of the Antitoxin Laboratory. At once arrangements were made with a large municipal public health laboratory in the United States to obtain the much needed supply for the Red Cross Society. It was found that for the price of sixty-five cents each, the ten thousand packages could be obtained. This saved the Red Cross approximately one half the amount they proposed to spend.

This incident focussed the attention of the Laboratory on the necessity, if at all possible, of at once undertaking the preparation of this serum. A member of the Board of Governors of the University of Toronto, Col. A. E. Gooderham, who is also a member of the executive of the Canadian Red Cross Society, at once offered to equip a laboratory for the purpose of producing tetanus antitoxin. At the same time, the Department of Militia and Defence agreed to make a grant of five thousand dollars ($5,000) on the condition that the entire output of the antitoxin should be available for the use of the De-

partment if they required it. The Antitoxin Laboratory gladly agreed to this and went further and promised to supply tetanus antitoxin at approximately cost price. The special laboratory was at once established under the direction of Dr. R. D. Defries, and for over one year has been preparing and sending to France all the tetanus antitoxin required for the use of the Canadian Expeditionary Force, at a price lower than the lowest cut price quoted by any American manufacturer of tetanus antitoxin. Since the Laboratory began this work over fifty thousand packages have been sent overseas.

The work of the Laboratory was much hampered at the outset by the lack of accommodation for horses and other necessary laboratory animals, and because the University did not possess a farm, the horses could not be kept under the best possible conditions. Also the available laboratory space was inadequate. When this became known to Colonel Gooderham he promptly increased his gift many times and purchased a fifty-acre farm in York township about twelve miles north of Toronto. On this farm, a magnificent laboratory and stables have been built through Colonel Gooderham's generosity, and the whole property given to the University. H.R.H. The Duke of Connaught has been much interested in this work and has graciously consented to the Laboratories being called the Connaught Laboratories of the University of Toronto.

So in the future the work of this Department will go on under ideal conditions, provided for in a truly splendid fashion by Colonel Gooderham.

Canada now has an institution which is comparable in the scope of its activities to the Serum Department of the Pasteur Institute, Paris, the Lister Institute, London, and the Research Laboratories of the Health Department of New York City. The proceeds above the amount actually required to run the Laboratories are used to further research in Preventive Medicine. As soon as the war is over this is to be done in the Antitoxin Laboratory of the University of Toronto. At present all the energies of the Laboratory are being bent in the direction of war-work, since this is the first duty of every loyal Britisher to-day.

NEUROSES IN RETURNED SOLDIERS*

By Goldwin W. Howland, M.B., M.R.C.P. (Lond.)
Neurologist to Out-door Department, Toronto General Hospital.

The nervous cases that have passed through the hands of Dr. Julian Loudon and myself at the Military Convalescent Hospital show at the present time 75 per cent. functional nervous disorders as compared with 25 per cent organic cases, a proportion which probably depends on the fact that many of the nerve injuries pass, I suppose, directly into the hands of the surgeon.

These functional nervous cases may briefly be divided into five divisions for the purpose of classification, but not, as I shall later show, from the standpoint of understanding them, and these divisions with their percentages are:

Neurasthenia, 59 per cent.
Hysteria, 21 per cent.
Epilepsy, 12 per cent.
Tic, 4 per cent.
Dementia præcox, 4 per cent.

One can quickly dismiss the last class, as they fall into the asylum group, to which most of the insane cases go without entering our clinic. Of these we have seen it was evident that the war service was only a factor in increasing their natural course in life, and a majority of these cases never saw the battlefield, while those that did were unquestionably much the worse for the strain.

The *epileptic division* are of considerably more interest, as they naturally are given a certain pension. In our experience nearly all these cases were old chronic epileptics who should never have enlisted, or cases that had epilepsy and had been clear of attacks for a varying number of years. The result of service has been to cause a return of their attacks or a marked increase in their frequency, but fortunately many of these men were detected in their training. It is most advisable that a special outlook should be taken by medical examining officers for this disease, as the number who have enlisted and the total

* Read at meeting of Ontario Medical Association, Toronto, June, 1916.

amount of their pensions must have cost the country a fair sum of money.

There are a certain number of epileptics produced in this war, but they appear mainly to be cases who have received true organic injuries from penetrating wounds of the brain and fracture of the skull.

The remainder of the cases forming 48 per cent. of the whole fall into the classes called neurasthenic, hysteric and tic conditions.

Now, I desire to lay great emphasis on the following facts: In reviewing the great number of symptoms presented by these soldiers, one finds it impossible to divide them into definite diseases, *i.e.,* neurasthenia, etc., but it is necessary to realize that their symptoms are disturbances in the functions of their nervous system, and that the same individual may have at the same time increased irritability in some function, exhaustion in another, and the typical dissociation of hysteria in a third. This is true not only of war cases, but also in civil life, and I firmly believe that it will be a great advance in the study of these disturbances if we look at them entirely as definite disturbances in function and not as separate and definite diseases. This method is followed in this paper.

Turning our attention in the first place to the psychical symptoms, one finds that insomnia is by all means the most common, and was a striking sign in 30 per cent. of patients, while in those who were able to sleep there are frequently dreams of the most nerve-racking type, so that they will rise from slumber in fear and trembling, and be glad to awake. This undoubtedly increases their general nervous condition, and must be controlled by hypnotics.

Many of the men state that they are exceedingly irritable, and that they themselves are conscious that they are unable to control themselves as formerly, and if irritated they say it is at times difficult to think, but that they at once become excited, and cannot control their actions. Now this is of great importance, as there have been several disturbances of moment in certain places, and I firmly believe that it will be necessary for those in judicial places to carefully remember the characteristic that these men not only describe but heartily regret and ask aid for.

A secondary feature arising from this is a feeling of restlessness, and it may be a source of difficulty in finally getting them settled at work, as indeed we have already found. This

is not discontent, but a positive loss of the ability to remain quiet, even if occupied, and if forced to do so, ending in an increased degree of nervousness. No less than 25 per cent. of cases find that their memory is no longer good, and 8 per cent. of them have a definite dissociation of memory, of which this is a typical case. Private M., after shell shock, continued in the fighting line, but his comrades had to prevent him from marching away towards the enemy. On observation, he was found to have lost all memory from the time of his shock, excepting the knowledge of eating, etc., which no Canadian man or officer ever forgets. On arriving home, he, as follows, described his sensations "I got off the train and some woman threw her arms around me and kissed me, and a girl kissed me, and they took me home. Well, they said that they were my mother and sister, and I took their word, but they might be anybody's mother and sister for all I knew. I never saw the home before, and they took me to see where I worked, but I never remembered seeing the place or the man in charge before." We have had several cases like this, and all are doing well.

The perceptive faculties are naturally influenced by these same irritable conditions; in fact, this firing up on slight provocation can be regarded from this standpoint, so that we may expect that the soldier so affected will not be so apt as formerly at understanding correctly what is said to him.

I have not noted many cases in which the common disturbances of perception, seen frequently in civil cases, is present, namely, fears concerning the outside world, nor the equally common type characterized by fear concerning, and concentration of the mind on the viscera, *i.e.,* the psychosomatic class.

The associative powers are parallel in their affection to the perception. Again, it must be noticed that a small percentage complain of exactly the opposite condition to this excess irritability, and state that they feel stupid and torpid and unable to think quickly, and are not easily aroused. Such a state corresponds to an exhaustion of their mental faculties, and yet is associated with irritability or dissociation in other functions.

The emotional power is not affected as much as in civil practice, and I have only noted one or two cases where loss of control over crying or laughing was present.

Concentration and volition are parallel in their defect to

the other signs, and while they are frequently noticed, yet they are seldom directly complained of.

The marked irritability of the cortex is shown by one symptom that is present in over 15 per cent. of cases, and is one of the hardest to cure, and that is dizziness.

It is found associated with all types of cases, and the difficulty in diagnosing it from the similar symptom in epilepsy is constantly occurring. It is quite a different condition from the usual faint and giving-way conditions that are seen in ordinary nervous patients. It is parallel to that feeling we all get if struck on the head. It corresponds, therefore, to a condition in which the patient is on the verge of becoming unconscious and is due to extreme irritability of the brain and is not to my belief of vaso-motor origin.

Naturally it is the dividing line between control by the individual and the commencement of loss of control, and the resultant dissociation that must follow. The attacks may last a few minutes to hours and days, and occur once or more often a day, to once a month or less. It is important as the men are much hampered by it.

It is the crossways symptom from which one passes to irritability, to dissociation, and to epilepsy.

Naturally, from this symptom one passes to true attacks of dissociation or hysterical attacks proper, and in our record they are present in only a small number of cases.

Turning now to the disturbances in the psycho-motor and motor fields, tremor is by far the most common sign, and is present in 33 per cent. of cases, while if to these is added the symptom of shakiness, it is increased to 46 per cent.

This shakiness is, however, often used to refer to an exhaustion condition, and in this connection should not be considered as a tremor and must be differentiated.

Tic of the face is an occasional unfortunate disturbance, and generalized tic of the body occurred in two cases, some 5 per cent. taking home this memory of the war. The results of treatment have been good, and I think all have recovered but one.

In regard to true motor dissociation, as seen in so-called hysteric paralysis, we have a record of 16 per cent. of cases, a truly high proportion for a condition formerly almost a prerogative of the female sex. What it would have been if the women went to war would have been a world that would have been paradise to a Charcot.

The cases here have been nearly all monoplægias of leg or arm, but the associated hysterical anæsthesia has been usually on both limbs. They are the most difficult to cure as they have been worked at for a year abroad, and the failure there has sent them home. I think that it would be better if all functional cases were at once sent back to Canada instead of staying in the varied homes in the Motherland.

The psycho-sensory and sensory symptoms are very varied indeed, but may be classed under very few heads when they are collected. Headache is a very common one and takes all forms in the 20 per cent. cases with it, and very often is described as a pain in the back of the head, made worse by worry.

The common psycho-sensory symptom of extreme susceptibility to noise is comparatively rarely complained of but evidently much felt.

From pain in the head to pain in the back is a regular everyday channel, but while one finds 7 per cent. of the latter, yet it is far more frequent to find shooting pains in the legs, as double the number of cases have this and suffer severely from it.

Dissociation of sensation is reported, as anæsthesias in 15 per cent. of patients, and it follows the usual functional types, but one must be very careful not to forget that it is often found in organic disease also. Loss of visual sensations and of taste, smell and hearing are to be found in different clinics, and particularly the former is quite common.

When we turn to the sympathetic nervous system there are three outstanding symptoms. The first of these is sweating, and the 20 per cent. of cases with this are very striking, as in some the sweat pours off them to actually form little pools of water on the floor. Associated with this is extreme vaso-motor irritability, and tache cerebrale is very marked and very long-standing in its duration.

The third sign is rapidity of the heart's action, and unfortunately one must exclude the question of too many cigarettes and of possible Graves' disease. The cigarette sickness is a fairly common cause, and many of the returned soldiers show the yellow finger but never the white feather.

Finally, one may add that vomiting, diarrhœa, shortness of breath and frequent micturition complete the picture of the varied functional disturbances in the returned soldiers.

In conclusion, a few words in generalizing the treatment of these cases. After these soldiers have undergone nine or more months under the care of the hospitals in England and France,

they have practically had all forms of up-to-date treatment. I am in favor of their trying a period of three months in their homes where these are suitable, and then, if there is no improvement, taking them into hospital and trying again to aid them. While in their homes it is best to give them such treatment by massage and baths as seems to help them.

Under this plan of treatment many of the cases are cured, and many have gone back to work, in fact it is often best to send them back as a means of treatment, and if not a success begin again their hospital course.

But there are a group of cases that the home treatment does not cure, and they require hospital care, as well as cases that get steadily worse at home in the three months there.

Now, the present convalescent hospitals are the worst places for these men, and they even do better in the general hospitals.

There must be a home for these nervous cases established apart from the military hospitals, and it is also necessary that this must not be used for mental cases, as the combination is bad indeed. It should be near a big city and be used only for this class of cases and for those whose homes are not suitable. I would suggest that it be a central hospital for all the adjoining districts.

It would also be very valuable for the cases in their first home treatment if there was some plan to board them out at Muskoka and Georgian Bay points, as the cases going up there do most extremely well.

So that in conclusion I advise (1) Home treatment, 3 months; (2) If no improvement, or gradual decline, a stay in a nervous hospital; (3) Arrangements for improving cases to go north; (4) Testing improved cases at work.

IMPORTANCE OF HOUSING AND LODGING-HOUSE INSPECTION *

By J. S. Schoales, Toronto.

When Dr. Hastings assumed office as Medical Officer of Health in 1910, almost his first act was to investigate the housing conditions of the city, because he knew, as every physician who gives any study to the question knows, and every sanitarian knows, that the general health of any city, and especially the death-rate, is dependent to a very large extent on proper housing conditions; and he accordingly had an investigation made in 1911, and the report presented to council.

At that time, and for some years previous, the population of Toronto had been increasing at a rapid rate. With the increasing population and the demand for houses far in excess of the supply, rents were excessively high, overcrowding was rampant, and slums were increasing.

The slum investigation of 1911 formed the basis of future work, and when a house-to-house inspection was made, covering the whole city in 1912, we found 8,000 insanitary houses, alleys and rear dwellings; 1,500 houses practically unfit for habitation; 4,500 houses overcrowded as tenements, with from three to ten families in each; six, eight and ten of a family were living in single rooms; 600 cellar dwellings, damp, dark and overcrowded; over 500 filthy hovels in a most ruinous condition, surrounded by dirty foul-smelling undrained stables, with scarcely yard room enough to turn around in; manure heaps, cesspools of slops, filth and garbage; evil-smelling privies, in some cases one for two or more families. Cellars filled with sewage from defective and bad drainage. Let me here say that we have no housing laws in Toronto, the only laws that have any bearing on housing are the building by-laws of the City Architect's Department, of which I will mention some presently. We have to depend entirely on the Public Health Act, and although the Medical Officer of Health has wide powers under that Act, his powers are sometimes questioned, and we have had decisions given against the Department.

*Read before the Institute of Sanitary Instructions, April 19th, 1916, Department of Public Health, Toronto.

We found 900 dark rooms. We found several families housed in stables. We found there were 17,181 insanitary outside privies, befouling the air with their fœtid odors. These were the conditions found, and it was thought there were no slums in Toronto.

Out of the 2,000 insanitary dwellings reported in 1911, 390 were unfit for habitation, were condemned and closed in 1912; 100 were torn down and replaced with new buildings; 200 were improved the first year. It was difficult work owing to the scarcity of houses, for although some 2,500 buildings were erected every year, they are not the class of houses required, but houses built for sale. It was not until 1912-1913 that we had the power to placard a house unfit for habitation. Since then the work has been greatly facilitated.

Houses Unfit for Habitation.

Sometimes we are blamed for not condemning more houses than we have. As a matter of fact we can only condemn and close a house when there is sufficient grounds to warrant that action being taken.

Complaints are made in the office or by letter, very often anonymous, of houses unfit for habitation, and when an investigation is made, we frequently find the house is structurally in good condition, possibly some slight defect, or it may be that filthy and slovenly habits of the tenants are responsible, and we have no grounds for condemning the house. Then, again, some will complain of conditions existing for the purpose of breaking the lease, when they want to move out, and a word dropped by the inspector, possibly unintentional, will give them the opportunity they are seeking, and they move out. Some time after the landlord sues for his rent up to the time the lease expires; the case comes up in court, the department is asked to assist the tenant, or he asks for the inspector who visited the house; trouble ensues. This has occurred three times within the past six months. When a house is reported as unfit for habitation, and the report is verified, it is at once condemned and vacated, but the order to vacate must come from the head of the department. Inspectors are not allowed to pass opinion or make statements to the tenant as to the house being unfit for habitation. The report must first be made to the chief of the division; it is wiser, prevents trouble between landlord and tenant, and places the onus on the department and not on the inspector.

It is a serious matter to condemn a man's house unless we have sufficient grounds. We must use discretion, and if possible prevent action for damages being launched against the Medical Officer of Health or the city. If there are insanitary conditions for which the owner is responsible, he is at once notified. If the tenant is responsible he is at once notified, and brought to court if he fails to take notice. The law compels us to give reasonable notice in all cases. Any ruinous condition, filthy, deficient in light, air, water or sanitary conveniences can be condemned. Any low-set house, damp, without proper drainage, or any structural defects, where the tenants are unprotected from the weather and storm, can be condemned, but we cannot condemn a house for one reason alone.

Up to the end of 1915 we have condemned and closed up 1,007 houses and hovels as unfit for habitation; 500 have been pulled down and new buildings substituted; factories, apartments, stores and dwellings; 300 have been improved and about 200 remain closed.

In addition to this we have had over 8,000 houses cleaned, drained and otherwise improved in sanitary conditions, besides public health, buildings improved in ventilation to the number of 200, not including the work done in industrial hygiene; and we have had no litigation or court actions, except in cases where we prosecuted a landlord for re-letting a condemned house.

Houses in Alleys, Lanes and Places.

In 1913 the building by-law was amended, prohibiting the erection of dwellings in streets less than 40 feet in width. If that law had been enacted fifty years ago, there would have been no alleys or dwellings on lanes and narrow streets such as we have there to-day. They are there and cannot be removed without legislation. We have to keep such places continually under observation and inspection to prevent slum conditions. There are over 3,000 possible slum places on our list in the different sections of the city, regularly visited by the municipal housekeepers, a sub-division of the housing division. These women are not necessarily sanitary inspectors, but sanitary instructors, visiting the homes and teaching the mothers clean and sanitary methods of keeping house and giving advice on domestic matters. Every case of destitution, illness or anything pertaining to child welfare, which they may observe in their daily

visits, is reported to the division dealing with such cases. In this way we feel good is being done in cleaning up slum places.

You have heard of "Mrs. Wiggs of the Cabbage Patch." You can see Mrs. Hoan's cabbage patch if you care to take a walk through the Ward in the summer; and in the east end you will come across Mrs. McCall's cabbage patch, and west, through the Niagara district, Mrs. Hall will know her cabbage patch.

We are working along the lines of education among certain classes, and we are getting some results. Very often we have to issue the blue paper in order to get results, and even then it is sometimes difficult to force cleanliness.

Yard Space.

The building by-law has for years made provision for not less than 300 square feet of yard area for every dwelling. In 1913 that was amended, making provision for not less than 500 square feet for each dwelling. That is a wise provision, but it does not go far enough. Not more than 68.7 per cent. of any lot should be covered with buildings for dwelling purposes, except in case of a corner lot, to insure good light and air.

Cellar Dwellings.

Out of the 600 cellar dwellings, we have closed over 500. Some of the worst plague spots, damp, dark and overcrowded, where disease was found among the occupants. I might cite case after case, but time will not permit.

There are cellar dwellings and basement dwellings. Basements are permissible, if dry, well lighted and with thorough ventilation, but we condemn all cellar dwellings. We differentiate between a cellar and basement, in that a cellar is a story where more than one-half or two-thirds of the light and space between floor and ceiling is below the ground level.

A basement is a story where more than one-half of the space and all of the light is above the ground level.

Back to Back and Rear Dwellings.

While we have closed up a number of such places permanently, there are still a number that ought to be closed, but are not for the reason that as long as they are reasonably clean and have sanitary conveniences, the department can't interfere.

When a rear dwelling is condemned and closed the owner can secure a permit from the City Architect to improve the building; but if the building is pulled down it can never be restored. The building by-law until recently prohibited the erection of a building for human habitation in rear of one already on the lot; but it didn't prohibit the erection of a dwelling in front of a rear dwelling; and that is why we have rear and back-to-back dwellings to-day.

In 1913 the by-law was amended so that no more rear dwellings can be erected or used for dwellings (case in court). That should have been the law from the first (bad administration).

Overcrowding had increased up to 1912-1913. Rents were excessively high—there were no houses to be got. We required at that time at least 10,000 houses at reasonable rents in order to house those that were being turned out of condemned places, and the families that were crowded together in single houses, so the department was face to face with a very difficult problem. The situation was so acute that something had to be done; disease was spreading from excessive overcrowding, and we commenced to crusade against all overcrowded dwellings and lodging-houses. Families were notified under threat of prosecution to remove, and advised to double up in single houses rather than live as they were. Several were summoned to court and remands given from time to time in order to procure other places. In 1914, you will remember, there was a slump in real estate, owing to the financial depression at that time, and some 3,000 houses had been erected by speculative builders for which they could find no sale; and rather than keep them standing vacant they were put up for rent. The result was that there was a general doubling up in single houses, and the older houses were vacated; new houses were occupied—then rents dropped. This was the only course for us, and we took advantage of it.

The following house-to-house inspection for 1913-1914 shows the result of our work in checking overcrowding:

	1913.	1914.	1915.
Single houses occupied by 2 families	5,000	11,000	10,500
Single houses occupied by 3 to 4 families	3,000	883	400
Single houses occupied by 4 to 6 families . . .	1,000	144	. . .
Single houses occupied by 6 to 10 families . . .	500	48	. . .
Lodging-houses	700	980	496

We considered under the circumstances it was better for 22,000 families to live in 11,000 houses, than for the same number of families to live in 4,500.

Now, as to when a house is overcrowded, that is determined according to the number of inmates, the number of rooms and the air space. It has been computed that when the average number of occupants per room is one-and-a-half, the house cannot be overcrowded, but when it reaches two there is overcrowding.

We do not, however, always follow that rule. We consider the air space and the quality of air, 600 cu. ft. is the Government standard for air space per individual for sleeping. Sometimes we find 400 or even 300 cu. ft. in a room well lighted and ventilated is better than 600 cu. ft. with bad ventilation. In many cases we find the average bedroom is less than 1,200 cu. ft., and so we have to use judgment. Two children under twelve years of age count as one person; they inhale and exhale about half the air that an adult will, consequently only vitiate half the amount. According to scientists, a man at rest exhales 0.7 of a cu. ft., CO_2; while at work he exhales 1 cu. ft. per hour; children one-half.

Dark Rooms.

As I have said, there were 900 dark and insufficiently lighted rooms, some without windows or light except what came through the door—others again with borrowed light from rooms or halls. Most of these were in apartment houses that had been erected a few years previous, when plans were passed and permits issued by the Architect's Department without any reference to the Department of Health. The result was that owners utilized every foot of space without regard to the proper lighting and ventilation of living and sleeping rooms, many of which were lighted by air-shafts and light-wells covered at top. I am glad, however, to say that the City Architect is co-operating with this department, and in future all plans for buildings to be occupied as dwellings are submitted to the Department of Health for approval before permit for such is granted, so that in future rooms must have sufficient light and ventilation. We have closed up or had improved 800 such rooms. There are still a number of insufficiently lighted rooms which cannot be improved, but are not used as bedrooms.

The city can congratulate itself that Toronto cannot begin to compare with other places in the matter of dark rooms, when

we consider that in 1903 the city of New York had 370,000 such rooms. In 1913, just ten years afterwards, there were still 23,788 dark rooms and 78,113 insufficiently lighted.

Yard Privies.

Out of 17,181 yard privies in 1912, there remain now only 4,000, having closed up over 13,000 since 1912, and if it were not that we have had to relax in this work owing to circumstances arising from the war, a greater number would have been closed. The most of those remaining are in the outlying districts. We have had to give extensions of time in some cases for various reasons. Dr. Brittain, of the Bureau of Municipal, has stated that this reduction in the number of yard privies is a most remarkable achievement. It shows the wisdom of specializing.

Lodging-houses.

There is no class of houses that require more frequent and rigid inspection than the common lodging-houses, where the foreign element lodge. Composed as they are of different nationalities, they seem to delight in crowding together and live under the most insanitary conditions. They haven't the least conception of cleanliness, or what sanitation means, and the only way we can teach them is through their pockets.

It is not necessary for me to relate the conditions found from time to time. You have already heard the different reports of the filthy, verminous and overcrowded places, and how tuberculosis was beginning to spread, and how numbers of Bulgarians and Macedonians affected with the disease were reported by the public health nurses, due to filth and crowd poison; and also the number of lodging-houses that have been closed without the aid of the police court. The magistrate refused to consider overcrowding, and would only listen to evidence of filth. The most glaring case, about two years ago, was a store and five rooms in which were found at midnight 77 men sleeping like cattle—25 in one room with space enough for 6, lying four in a bed, and every foot of floor space taken up so that we had to step astride their bodies in order to pass. Every door and window closed. The case was brought to court, and the magistrate threw it out. Finding it useless to summons for overcrowding, we issued a sum-

mons for insanitary conditions in every case where there was overcrowding, and got convictions, and fines amounting to hundreds of dollars. This soon caused them to spread to other parts of the city, so the lodging-houses increased from 100 in 1910 to 980 in 1914. At present there are only about 900, the decrease due to the present war.

The one great drawback in dealing with lodging-houses is that they are unlicensed in Toronto, and until they come under license it will be impossible to keep them under proper control, do what we will.

There had been a decided improvement in the restaurants of the city since they were placed under the control of the Medical Officer of Health. They are regularly inspected by an inspector who understands his business, and unless they come up to the requirements necessary, the license is not granted. Lodging-houses can be controlled in the same way, if they are placed under license, the same as restaurants. I know Dr. Hastings is about to seek legislation for the licensing of all such places.

Tenements.

A tenement-house and an apartment-house are, in one sense, the same. Any house in which there are three families or more living is considered a tenement-house, and the same with an apartment-house, but there is this difference—an apartment-house consists of a number of four, five or six-roomed suites or apartments. Each family lives independent of the other, has its own lavatory and conveniences, while a tenement-house may be occupied by several families on a flat, with only one convenience common to all—sometimes only one water tap and sink for the use of all on the flat. This is the class of houses we want to prevent getting a foothold in Toronto. We have only three at present, and from our experience in dealing with those, we can characterize them as nothing but a curse to civilization.

When families live in tenements, the sanctity of the home is broken, there is no privacy, and privacy is the essential of the home; and when all sexes, men, women, boys and girls, have to use the same closet, the same halls and stairs, sometimes dark, it tends to immorality. Children reared or brought up in tenements are delinquent and defective. There is no place for them to play; the street is their rendezvous, and they very soon become adepts in vice and crime.

Prevention is the only cure for slums and overcrowding;

and the only way to prevent such is to have more one-family houses. At the present time there are upwards of 25,000 families living doubled up in single houses and apartments. We have, all told, on the first of January, 1916, 97,136 buildings in Toronto, 84,345 of these are dwellings and residences, and 12,791 are other buildings, schools, churches, factories, public buildings, etc. Now, in order to provide every family with a dwelling, which is necessary from a sanitary point of view, we ought to have 108,000 dwelling-houses, instead of 84,345.

In the last five or six years, the population of Toronto has increased 200,000; at present it is about 540,000. At the expiration of the war people will be flocking into Canada from different countries, and there will undoubtedly be an influx into Toronto. There will be no retardation of the city's progress; Toronto is bound to go ahead, so that in five years from now we will most likely have another 200,000 added to the population. Now, what does that mean? If it means anything, it means this—taking a low estimate, say, of 150,000 increase in five years, and the average number to a family is five, it means 30,000 families that will have to be provided with dwellings, or 30,000 houses. It is possible that number might be housed in 25,000, but even at that we require, at the very least, 5,000 houses erected every year for the next five years in order to meet the demand that will be for houses at reasonable rents; and unless we can get them, overcrowding will be rampant, slums will increase, and the community will have to pay the penalty.

Of course money is the prime object. It takes money to eliminate the slums and plague spots of our city, and we are met on every hand with the cry of economy, even in public health matters. Economy is a good thing, and it is a laudable purpose to economise in all things, but it is false economy and bad policy to economize at the expense of life and health.

Editorials

CANADIAN ARMY MEDICAL SERVICE

About the middle of November, 1914, the First Canadian Contingent arrived in England. The Director of the Medical Service was Surgeon-General Carleton Jones, who was promoted to that rank during the previous September, after a long period of service in the Canadian Militia. The arrangements for the C.A.M.C. were organized and carried out by General Jones, and a very competent staff of officers of long experience in the Canadian Militia.

Perfection had not been reached within a year after going overseas, but great efforts were being made to remedy any defects disclosed under the strain of war. In the Summer of 1916 the Minister of Militia appointed a commission composed of strong and able men to investigate and report. The commission consisted of Drs. Bruce, Reid, McKeown, Scott, Wilson and Hunter. It unfortunately happened, so far as we can learn, that the majority of these men were not in sympathy with Dr. Carleton Jones.

SIR SAM HUGHES ON THE MEDICAL SERVICE

Before quoting from the report we shall give a resumé of a speech delivered by Sir Sam Hughes in the House of Commons, February 6, 1917, which appeared in several Toronto papers. We have taken that from *Saturday Night* because that paper has been rather favorable to Sir Sam Hughes and Colonel Bruce in the controversy: "I

have not read the report but Dr. Bruce talked over the matter with me, and his views and those of the Prime Minister are exactly the same. I look at the matter purely from a business point of view. I could never see why our men should be called from say Folkestone to the North of Scotland. Nor can I see why our men should be sent to the V.A.D. Hospitals. These hospitals are presided over by the most charming women in the world. I am not saying a word against them, such nice little girls with five or six weeks' training in some Saint John's Ambulance affair, or something of that kind. The dearest little creatures in the world for smoothing brows and holding hands, but I did object to Canadian soldiers being sent there and paying three shillings a day for their keep. We had hundreds and hundreds rambling round England. We were returning 8 to 10 per cent. of our men to the front while the British were returning about 30 per cent. until I arranged the convalescent plan, which has since been adopted by France, Italy, and even by Germany and Austria.

I am not reflecting on General Jones, but if this agitation is going to be carried on by V.A.D. people, and fourth grade society dames in London, the facts are going to come out. Lady Drummond sent me several letters. I am not aware that Lady Drummond or any other society lady was ordered to run our hospitals. There was also Sir William Osler who wrote several letters.

I told the Prime Minister at one time that Jones's statements as to hospitals, etc., were no good. In 1916 I went over intending to look after the business end of things. I was not interfering with the medical end. I did not know Baptie, but the fact that he was

an officer in 1881 does not impress me. He would favor the V.A.D. Hospitals; that is where the trouble came. Sir George Perley favored the V.A.D. Hospitals. Apart from Baptie the men on both commissions were good."

THE DRIFT OF THIS SPEECH

The Minister of Militia was evidently dissatisfied with General Jones, and it is more satisfactory from our standpoint to show that by Sir Sam's own words. It unfortunately happened also in that same year that Colonel Bruce and General Jones were at loggerheads, and we were told at the time that the majority of the A.M.C. men of Great Britian and elsewhere were in sympathy with General Jones.

It will perhaps surprise a good many people, as it did ourselves, to learn from Sir Sam's own lips that he never read the report. We understand that it was marked confidential, and there is evidence in almost every paragraph to show that it was written in rather a hurried fashion, and that it was of a fault-finding rather than of a judicial character. It seemed rather like a bundle of memoranda of a private character upon which a report for the public could be founded. So far as the evidence thus far available is concerned, the Minister, without even consulting his colleagues, simply threw the whole bundle in one heap or in fragments to the newspapers as quickly as he could. We think that this treatment of the so-called report was grossly unfair to Colonel Bruce, and also unjustifiable from every standpoint. It would seem that "one of the frankest indictments ever received from a responsible Minister" was cast broadside before it was even considered by the Gov-

ernment. It will be noticed also that opinions regarding sequestration, concentration, the opposition to V.A.D., and the antipathy towards General Jones, came from the Minister in reality, although technically from the commission, which has to bear the burden of all the mistakes contained in the report.

It is a pity that in his address the Minister could not avoid sneering at people like Lady Drummond and Sir William Osler. It seems unfortunate also that he should have made such unpleasant reference to fourth grade society dames in London, and it seems to us disgraceful that he should be allowed in the Canadian House of Commons to use such terms as " dearest little creatures in the world for smoothing brows and holding hands " in speaking of our Canadian women, married or unmarried. Such language is coarse and indecent, and should not be allowed in the chief Parliament of Canada without protest from either the Speaker or some of the Members, who surely have some regard for decency.

THE BRUCE REPORT

We can only mention a few points because of Sir Sam Hughes' reference to the most important ones which we have already given.

The report was divided into twenty-three sections, each of which contained adverse criticism on some branch of the work. One of the statements was that re-organization of the Canadian Military Service from top to bottom was necessary. The blame for the unsatisfactory position of things was placed on General Jones. Concentration in Canadian Hospitals was recommended and the V.A.D.'s were condemned as inefficient, expensive and unsatisfactory. There

was a woeful laxity in weeding out unfits during enlistment. The method of operating with the Red Cross was unsatisfactory. There was much discontent among the officers because of improper promotions. Many men had been given commissions who had been failures as medical men at home; many are over age, some are drug fiends and some are addicted to alcohol.

THE BAPTIE REPORT

Before giving any clauses from the Baptie report, we desire to say that no better men for the purpose could have been found overseas, and this applies to Sir William Baptie as much as to any of the others.

Sir Sam's sneers about Baptie are uncalled for and quite unjustifiable. We were very sorry some months ago to notice that Colonel Bruce also raised certain objections to Baptie. At all events, with or without Baptie it contained a solid lot of men. They were, in addition to Baptie, Drs. Fotheringham, A. E. Ross, J. M. Elder and E. E. Ashton. According to this Board the work of General Jones and his staff was good, and Jones is especially commended for his zeal and industry. It condemns the recommendation that Canadians should be concentrated in Canadian Hospitals. There are 20,000 patients in hospitals in Great Britain. It would require 4,000 additional beds to accommodate them all in Canadian institutions. This would involve an additional expenditure of $1,000,000. The V.A.D.'s were efficient, the charge never exceeded three shillings per day. The cost in a military hospital is at least six shillings per day. The Board found that in the V.A.D. Hospitals the patient was well fed, com-

fortable, happy, and received an amount of care that is only possible in institutions organized on the lines "of the home." This has been an enormous asset in the case of soldiers widely separated from their kith and kin. The Board agreed with the Bruce report that large numbers of unfits have come from Canada, and that additional inspection of all Canadian patients in British Hospitals is desirable, that additional consultants should be appointed, and that there should be a greater return of invalided soldiers to Canada.

RESULTS FOR GENERAL JONES

We are told by the *C.M.A. Journal* that General Carleton Jones has been reinstated as D.M.S., Canadian Medical Services in England, and that he has been appointed also Inspector General of the Canadian Medical Services in Canada, England and France to supervise and co-ordinate the service in all its extent. We are very glad that Dr. Jones has suffered nothing from the attacks which have been made upon him. He is a kindly, courteous gentleman, a conscientious and diligent worker in matters pertaining to hygiene in both civic and military aspects, and is one of the ablest and most prominent physicians connected with the general military organization in Canada.

RESULTS FOR COLONEL BRUCE

We also learn from the same Journal that Sir George Perley has cancelled Dr. Bruce's appointment as special Inspector General. This decision will be considered just by a majority of the physicians and surgeons of Canada. His actions and report were

not generally approved. He made certain mistakes, but fortunately has not been injured thereby to any appreciable extent. In his own sphere he has suffered nothing. He is still recognized as an able surgeon, and in the new duties that have been assigned to him in military surgical work we have no doubt he will prove a pronounced success.

News Items

Dr. Warren has returned to his work D.A.D.M.S. No. 2 Military District.

The meeting of the Ontario Health Officers' Association will be held in one of the University Buildings, May 29th and 30th.

The American Rocky Mountain Club collected $500,000 with which to build a new clubhouse; but its members changed their minds about building, and handed the whole sum over to the Belgian and French Relief Funds.

The following have been decorated with the military cross: Capts. A. A. Dinnan, F. W. Lees, G. G. Grier, R. M. Luton, J. E. McAskill, W. F. Nicholson, Paul Poisson, W. D. Rorison and L. R. Meech; Lieuts. W. N. Gilmour and C. S. Wynne.

Dr. J. W. S. McCullough has sent a circular to each municipality urging the various councils to take steps to procure a pure milk supply. He states that Toronto not only has a good milk supply, but has saved $390,000 by keeping water out of the milk.

Miss Nan Gooch and Miss Isabel Bleasdell, after qualifying for massage work, left Toronto January 25th, to work in Hill House Military Hospital, Kent County, of which Dr. Norman Sutton of Peterborough, Ontario, is Commanding Officer.

The following Lieutenants were attached to the C.A.M.C. in January: Drs. J. C. McClelland, J. B. Hanley, J. S. Douglas, R. Mackinley and G. H. Stoble. It is stated that more first-aid men are needed at the front to give immediate aid to the wounded. Men who can assist in the urgent work in field ambulances and hospitals are also needed. It is considered that at the Somme such men could have saved dozens of lives a day.

Lt.-Col. C. W. Gorrell, M.D., McGill, was found dead in his room in London, England, January 23rd. At the inquest the verdict given out was "suicide while temporarily insane." It is supposed that he had an attack of apoplexy with some paralysis a few weeks before, from which he never fully recovered.

As announced in our last issue, Dr. Theodore Janeway will deliver the address in medicine at the General Meeting of the Canadian Medical Association. Since that time we have learned that Dr. F. J. Shepherd, of Montreal, will deliver the address in Surgery, and Dr. McKenzie Forbes, the chairman of the military section, is preparing a programme which is likely to be very attractive.

Lt.-Col. E. B. Hardie, M.D., D.S.O., of 688 Euclid Ave., Toronto, has been appointed C.O. of the Military Base Hospital, Toronto, in the place of Lt.-Col. Warren, who had charge for a short time. Dr. Hardie went overseas with the 1st Contingent with the 2nd Field Ambulance. For a time he was second in command, and then became first. He has been 27 months on active service and nearly 24 months on the firing line.

The meeting of the Ontario Medical Association will be held in the Mining Building of the University, May 30th and 31st and June 1st. We have intimated in previous issues that the committee on papers and business has done much good work, and it is hoped that the programme will be quite as attractive as that of last year, which was the best that the Association had known up to that time.

It was reported early in February that Col. Marlow, A.D.M.S., would soon ask to be relieved of his duties as Administrative Medical Officer. The report caused very much regret, as he has proved himself to be a thoroughly competent officer. It was stated that he was much dissatisfied with the progress of the problem of dealing with returned soldiers, and also with the conditions imposed on the A.M.C. as a result of the appointments of the Hospitals Commission. At the time of writing it is hoped that matters will be so arranged that the C.A.M.C. and the Hospitals Commission will work together more satisfactorily.

The following officers of the C.A.M.C. were recently mentioned in the military despatches in France: Colonels G. L. Foster, C.B., Arthur E. Ross, C.M.G., and H. S. Birkett, C.B.; Lieut.-Cols. R. J. Blanchard, E. B. Hardy, H. M. Jacques, C. A. Peters, W. Webster, D.S.O., R. P. Wright, D.S.O. and T. W. Young; Capts. N. J. Barton, R. H. Hardisty, H. Hart, R. S. MacDonald, D. E. Robertson, S. C. Ross, W. H. Scott and J. P. Walsh.

Dr. Joseph C. Beck, a prominent ophthalmologist, who has practised in Chicago twenty-two years, was invited to address a meeting at the Academy of Medicine in Toronto, and read a paper. He consented, and agreed to come and attend the meeting held February 12th. The Vice-President, Dr. Gibb Wishart, gave a dinner for him at the York Club, but he did not put in an appearance. The cause was not known until the party had nearly finished their repast, when a telegram came stating that he had not been allowed to land at Windsor, and was compelled to turn back to Chicago, because he was an alien. It appears that Dr. Beck was born in Prague, Bohemia, but he has been for some time (many years we understand) a naturalized citizen of the United States. The Fellows of the Academy naturally felt much chagrined that their expected guest should have been subjected to so much humiliation. However, it turned out that it was a mistake, and his detention was due to the fact that he had not a proper passport.

It is a solemn fact that nearly every patient whom a physician treats will tell him that his or her father was a well-known physician or that an uncle was a celebrated practitioner of the art of healing. Being unknown or forgotten, this pleasant little fable is taken for what it is worth, but it usually fails in its object, which appears to be to obtain medical services gratuitously. The sweet, delicious voice of the siren may sing quite softly, but it usually fails unless the physician has undergone a course of softening. Some clients believe that softening of the heart is but a preliminary step to softening of the brain. You are wrong, Telemachus, only the most young and callow are taken in by such clumsy tricks.—*The Urologic Review.*

Personals

Dr. R. V. Bray, of Chatham, has been appointed Jail Physician in Kent County.

Capt. Hague, of Belleville, Ont., has been appointed Medical Officer of the 235th Battalion.

Dr. Arthur Small, of Chicago, visited his friends and relatives in Toronto February 6th.

General G. Sterling Ryerson went to Ottawa February 17th and returned to Toronto on the 21st.

Capt. Stanley Ryerson, M.D., returned to Toronto from Saloniki on leave January 25th.

Dr. Donald Myers, of Toronto, went to Ottawa February 16th and expected to remain until the 21st.

Drs. Jno. W. S. McCullough and George Porter went to Ottawa February 16th and returned on the 18th.

Capt. J. N. MacRae, of Galt, Ont., is now acting Adjutant of the Central Military Hospital, Shorncliffe.

Colonel Prowse, M.D., of Winnipeg, is C.O. of the Patricia Convalescent Hospital recently opened at Shorncliffe.

Col. Jno. T. Fotheringham was made a Companion of St. Michael and St. George, Feb. 5th.

Dr. Charles Sheard returned to Toronto, Feb. 20th after spending several weeks in the far South.

Dr. H. B. Anderson, of Toronto, left home Feb. 10th, and expects to spend several weeks in California.

Dr. Henderson Bryce, who graduated M.B. from Toronto, 1911, is now practising at Stave Fall, B.C.

Col. Foster, M.D., has been made Deputy Director of the Canadian Medical Service in France.

Dr. Crawford Scadding left on a visit to California, January 31st, expecting to stay there about a month.

Dr. Jno. L. Davidson, 20 Charles St. E., will in future confine his practice to office and consultation work.

Lt.-Col. Bryce McMurrich returned to Toronto on leave, January 26th. Previous to that he had spent one year with the C.E.F.

Dr. L. S. MacKidd, the only son of the late Dr. MacKidd of Calgary, is now a Major in the C.A.M.C. on active service in France.

Dr. W. W. Chipman, of Montreal, has been appointed a member of the Military Hospitals Committee, of which Lieut.-Col. Thompson, M.D., M.P., is the Medical Officer.

Dr. S. S. Membery, Adolphustown, Ontario, formerly Surgeon on H.M.S. *Cochrane,* has received promotion and is now Fleet Surgeon of the 10th Cruiser Squadron.

Dr. J. G. Wright, who was for a time on the staff of the Rockwood Hospital for the Insane, has been appointed Medical Superintendent of the Kingston General Hospital.

Col. Herbert Bruce, M.D., sailed from England for Canada January 27th on five weeks' leave. He reached Toronto February 7th. He was entertained by a large number of his friends at a banquet in the King Edward Hotel, February 14th. When he returns to England he will act as Consulting Surgeon in the British Service, spending probably part of his time in England and part of it in France.

Dr. George McDonagh, of Toronto, after staying at the West Indies Islands for a time went to California and was taken ill at Los Angeles. When last heard from he was in New York. At the time of writing his friends are uncertain as to when he will return to his home.

Capt. Jos. Lawson, M.D., has been made M.O. of the 204th Beaver Battalion.

Capt. W. L. MacBeth, M.D., of Hamilton, was made O.C. Hamilton Military Hospital, Jan. 28th. Before that he was in the Medical Service overseas for some time.

Capt. J. C. McCollum, winner of the Military Cross, who did admirable service overseas in both the R.A.M.C. and the C.A.M.C., is now at the Base Hospital, Gerrard Street East, Toronto.

Flight Lieut. Allen Todd, son of Dr. J. A. Todd, and brother of Dr. Harvey Todd, Toronto, has been missing since January 4th. Word was first received to that effect, January 23rd.

Dr. Jno. Reed McCaroll, who graduated M.B., Toronto University, in 1879, and M.D. in 1880, afterwards went into the Church and became a clergyman in the English Church. He was for a number of years Canon of St. Paul's Cathedral, Detroit. His friends in Toronto learned with much regret that he had a stroke of apoplexy Feb. 11th, and was pronounced the following day to be in a serious condition.

It was in Ancient Rome. An old physician was taking his constitutional with one of his pupils. As they were promenading on the Appian Way, the elder of the twain told the young patrician that something shining was protruding out of a small heap of manure. The latter turned up his nose and with a true curl of his patrician lip said *"olet"* (it stinks). The older man carefully and deftly raised the shining object and saw that it was a coin of considerable value. He carefully wiped it, placed it in a safe place under his toga and muttered *"pecunia nunquam olet"* (money never stinks). And how true is this in our twentieth century. Money will be taken from the hand of a leper, of a syphilitic or of one with the smallpox. But the old adage still holds and the most dainty, refined and particular will not alone receive the money but place it in the embroidered purse. Money will buy anything or anybody nowadays, and this may be the reason that its source is never closely examined. The rejoinder of the old doctor given above has become a saying, with all the value of a proverb.—*The Urologic Review.*

Obituary

LIEUT.-COL. R. C. McLEOD

Lieut.-Col. R. C. McLeod, C.O. No. 9 Stationary Hospital, C.E.F., died in London, England, January 6th.

LIEUT. CHARLES E. THOMPSON, M.B.

Dr. C. Everett Thompson died of pneumonia at the Military Base Hospital, Toronto, on February 3rd.

JNO. N. THOMPSON, M.D.

Dr. Thompson, of Omemee, died January 21st, aged 70. He graduated in 1874, and had practised medicine in Omemee for thirty years.

G. A. RICHARDSON, M.D.

Dr. Richardson, 14 Bloor Street East, Toronto, died January 31st. He graduated M.B., Toronto University, in 1904. He practised at Burk's Falls for some years before he came to Toronto.

CAPTAIN W. W. McKENZIE, M.B.

Mr. Thomas McKenzie, of the Andrew Mercer Reformatory, received official word from London that his only son Dr. W. W. McKenzie had died suddenly in England, February 20th,

aged 26. He graduated M.B. from Toronto University in 1914, and for nearly two years was a member of the staff of the Hamilton Asylum for Insane. He went to England in April, 1916, as Medical Officer to the 83rd battalion. After remaining in the camp at Shorncliffe for a few months, he was transferred to the Military Hospital at Shorncliffe. When last heard from by mail, a few days before his death, he was apparently well and in good spirits.

JOHN A. HENDERSON, M.D.

Dr. John A. Henderson, Assistant Professor of Anatomy in McGill University, died at his residence in Montreal, January 2nd, after an illness of only two days. Dr. Henderson was born at Paris, Ontario, and was forty-nine years of age. He received his medical education, partly in Toronto, and partly at McGill, graduating in 1893, when he obtained honors in all subjects and also the final prize.

Book Reviews

Diseases of Children. By EDWIN E. GRAHAM, M.D., Professor of Diseases of Children, Jefferson Medical College, Philadelphia; Pædiatrist to the Jefferson Hospital and to the Philadelphia Hospital; Consulting Pædiatrist to the Training School for Feeble-Minded, Vineland, N.J.; Member of the American Pædiatric Society, etc. Octavo, 902 pages, with 89 engravings and 4 plates. Cloth, $6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

This book is written in a pleasant and taking style which makes it quite suitable for either a student or practitioner.

Among the subjects treated very admirable directions are given in regard to Infant Feeding, especially as to the construction of milk mixtures, including the calculation of calorie and percentage feeding, being illustrated by formulæ reduced to ounces. Perhaps the most striking feature in those chapters referring to disease is in each case the treatment. For instance, in referring to the treatment of whooping cough, the author gives minute directions in regard to the administration of certain remedies, and gives his opinions very clearly on the vaccine treatment, which he finds useful in the disease itself, and also as a prophylactic measure. He considers, however, that it is not necessary or advisable in mild cases. He finds that there is a growing tendency to use a mixed vaccine.

We have pleasure in recommending it as a very excellent book for all who are interested in the diseases of children.

Before attempting to secure anæsthesia of the bladder for intravesical manipulations or operative work, see that the viscus is completely emptied so that the introduced solution will not be further diluted by mixture with retained urine.—*The Urologic Review.*

Selected Articles

PSYCHIATRICS, AMNESIA AND EPILEPSY

By Professor Gilbert Ballet, M.D.,
Of the Faculty of Medicine of Paris.

It is generally admitted that epileptic delirium, like the epileptic convulsion, is followed by amnesia, and this conception possesses very great medico-legal importance. When it can be shown that the accused person has absolutely no recollection of the circumstances or conditions in which the crime was committed, the probability is in favor of its having been done under the influence, and in the course, of an epileptic attack. It is generally held that when the subject can recall the circumstances, or even some of them, the hypothesis of epilepsy can be set aside. Now, although, in the vast majority of instances, this doctrine is correct, it must not be accepted as a constant, absolute rule.

A certain proportion of epileptic subjects retain the recollection, or at any rate partial remembrance, of their acts as well during the period of delirium with convulsive tendencies that are apt to follow attacks of major or minor, grand and petit mal, as during the stage of delirious restlessness that sometimes preceded the attacks. This is a fact to which I have often called attention. I hasten to add, however, that, although it is not yet generally recognized, it has been incidentally pointed out by various observers. On turning over the collection of cases bearing on crimes and misdemeanours committed by epileptic subjects, compiled by Legrand de Saulle (*a*), you will find several in which amnesia did not follow. Tamburini (*b*) was one of the first to call attention to these cases. Ducoste (*c*) set himself the task of giving prominence to them, and in his thesis you will find a fairly complete synopsis of the opinions of various observers on the subject.

It has been my practice to state that the delirious phases of epileptics are true dreams, and that with regard to the remembrance thereof they are strictly comparable with ordinary dreams. Now, when we have been dreaming, it sometimes

happens that we retain no trace of recollection of what we have been dreaming; sometimes we can vaguely recall bits of them, and occasionally we can recall them in every detail. For that matter, whether the recollection of the dream be partial or complete, it is, as a rule, rather ephemeral, while, on the other hand, in epileptics, although recollected dreams are possible, they are far and away the exception.

I am enabled to show you a patient who is in a state of post-convulsive somnambulism. This woman is 39 years of age, and has been epileptic for the last ten years. She has frequent attacks—in fact, she had three last night, and after the last one she fell into the state in which you see her now. She looks somewhat dazed and, as you see, displays a certain restlessness, and is assuredly not paying any attention to what is going on around her. She gives one the impression of a person whose thoughts are wandering, who is in a nightmare; she looks as if she were listening to voices and is anxious to leave the room in response thereto. We know by chance words which she utters when in similar states, that the voice she hears is that of an old lover of hers. As usually happens in epilepsy, the states of oneirism that follow the attack are always alike in this woman; in fact, apart from a few insignificant details, they seem to be absolutely identical. That is how we know, from her previous attacks, who is the hero of her dreams. This, too, enables me to foretell that on her awakening—that is to say when, from her second state—that of somnambulism in which she now is—the patient returns to her normal state, she will have no recollection of what is taking place around her at the present moment. This is a perfectly typical case of epileptic somnambulism of the kind that leaves no memory behind it. It is plain that if, during her dream, this woman happened to have impulsive tendencies and committed a crime, she would be absolutely unaware of having committed it, just as a little later she will have no recollection of this theatre, of the voice of her lover, and her attempts to answer his appeal.

But here is another woman of quite a different category. Mrs. M. is 30 years of age. As in the previous case, the epilepsy came on late in life, inasmuch as she did not have her first attack until she was 24 years of age. At this juncture I may inform you that, speaking generally, the delayed supervention of the affection is more apparent than real, and that in childhood these patients are subject to short, furtive absences of mind or to attacks of grand mal at night which escape notice.

However this may be, in this particular instance the first attack was followed by attacks of variable frequency, seeing that she has had from 12 to 110 well-marked fits in a year. Recently admitted to the Dubois Hospital to be operated on for appendicitis, the patient fell into such a state of excitement that she was transferred to our service. On her arrival on November 26th, she was very restless, alternately laughing and crying, was very loquacious, and her speech was characterized by a preference for verbal associations by assonance such as we often get in mania. During the night of November 28th-29th she had an outburst of grand mal which put an end to the excitement. Questioned on the morrow, she had no recollection of the attack; but, on the other hand, she remembered quite well the incidents that took place prior to the period of excitement. She remembers her admission to hospital, her transfer here, and so on.

During the next few days, and down to December 23rd, she had in all four attacks of major epilepsy, all followed by a phase of oneiric delirium, as to which I ought to say a few words. To convey to you a good idea of these delirious phases, which are always exactly alike, I cannot do better than read to you the written history of one of them—the one that followed the fit on December 23rd. The fit occurred during sleep, the patient being in bed. She told us that she saw her mother in the corridor, who wanted to speak to her. She got out of bed to go to her, and resisted attempts to keep her in bed. She fell into a temper, screaming, struggling, and pushing the nurses away, though without attempting to strike them. She kept calling out for her daughter, whose voice she thought she heard, and ran across the ward. She visited each bed in succession, awakening the patients, and as these more or less energetically resented being disturbed, she thinks they hate her, and she complains of them.

This scene came to a rather abrupt conclusion towards morning. Mrs. P. remembered some of the episodes, and herself comments thereupon while completing the narrative of the dream which she had lived in for several hours. "I thought I saw my doctor, Dr. G., lying in a bed on my right at the other end of the ward. They were certainly his eyes, but I felt that it was absurd for me to suppose that Dr. G. was there lying down near me. Nevertheless I did think that he spoke to me though I cannot recall his actual words. I merely remember the sense of what he said. I asked him for news of my

mother, about whom I was feeling anxious. He talked to me about my name. I doubt whether he was really there, the more so seeing that he appeared to me with a woman's hair, which is hardly admissible. I got into my head that my mother was dead as the result of an experiment, but I daresay I was wrong."

Suppose, what is by no means improbable, that, in the course of this dream, the patient had committed an act of violence. She would in all probability on the morrow have a more or less exact or vague idea of her act, and the expert who, relying on this retention of memory, would discard the hypothesis of epilepsy, would have made a mistake.

The dream just referred to is reproduced time after time after each attack, and it should be remarked that the patient does not invariably remember it. From this point of view, each attack differs in some way from its predecessors. It is as often happens in respect of ordinary dreams which we may not remember at all, or, on the contrary, we may have a usually fugitive recollection, which may be clear, or incomplete, or vague.

In any case, we must recognise the difference between the attack of restlessness that this patient presented on her admission and the dream state that supervened, a sort of post-somnambulic state. It is no matter for surprise that Mrs. P. should have been able to recall the incidents of her phase of excitement, during which she was not in a true state of second condition. The case shows us, at any rate, that the formula proposed by Christian (*a*) is too absolute—viz., "ante-epileptic delirium, of whatever kind, is characterised, once the fit has passed away, by complete forgetfulness of whatever the patient may have done during this period." It is more surprising and, in any event, more abnormal, that she should recollect, at any rate in part, the illusions of which she was the victim during the post-epileptic periods which constitute a true state of oneiric delirium.

In showing you this patient, gentlemen, it was in no wise my intention to diminish in any way the importance to be attached to amnesia as a characteristic feature of epileptic manifestations. My object is simply to show you that even in regard to epileptic mental disturbances there is no absolute rule, no rule that does not admit of certain exceptions. You must not lose sight of this fact, because it will enable you to understand certain medico-legal matters which would otherwise be difficult to explain.

ON CAUSATION AND TREATMENT OF "RHEUMATIC" CONDITIONS

By H. Ewan Waller, M.R.C.S. Eng., L.R.C.P. Lond.
Birmingham.

The treatment of rheumatoid arthritis is still eminently unsatisfactory. The same remark applies equally to a host of allied conditions designated as fibrositis, lumbago, sciatica, muscular rheumatism, neuritis, and so forth, all of which may loosely be grouped as "rheumatic." Salicylates, though undoubtedly of extreme value, seem to be more potent in the disease which we term rheumatic fever, or acute rheumatism, but even in this complaint the number of crippled hearts emphasizes the need for some advance in treatment. Correct treatment must depend on a correct estimate of the pathology of the disease under consideration. Acute rheumatism, which we will consider as a synonym for rheumatic fever, very commonly starts with tonsilitis, though not always. I have seen a case in which the infection started apparently in the nose. There are many who also think that the other group of complaints, which may loosely be termed rheumatic, are also due to germs. We have gonococcal and pneumococcal arthritis as definite examples, and also cases of septic arthritis, where the organism is a streptococcus or staphylococcus. But in rheumatoid arthritis the joints have hitherto proved sterile. Nevertheless, the analogy is so great that one cannot help feeling that here also some germ is at work. But where? The fashion of late years has been to assume that oral sepsis is the cause. It is, of course, essential to eradicate oral sepsis in any case of rheumatoid arthritis, and the teeth should always be the first point of investigation. But in some cases of rheumatoid arthritis all the teeth were taken out many years ago, while the rheumatism began quite recently. I do not wish to underrate the importance of septic teeth (pyorrhœa and chronic abscesses at apex of root fillings) as a cause of rheumatoid arthritis, but I cannot help feeling that the real seat of the trouble is in the intestinal canal. Sir Arbuthnot Lane has practised resection of the large intestine in some cases of rheumatoid arthritis, and his photographs of the joints, before the operation and after, leave no room for doubt that benefit has fol-

lowed. Perhaps it is better to part with tonsils, teeth, and large intestine than to have rheumatoid arthritis. But one may be pardoned for seeking simpler remedies. My best successes so far have been obtained with vaccines, mixed streptococcal, staphylococcal, and *Bacillus coli*. The addition of *B. coli* to the vaccines has appeared to be highly beneficial in some cases, but possibly it acts in a roundabout way. I am quite sure that there is a reflex relationship between the colon and the stomach. Clinically I have observed frequently that a mild colitis is an accompaniment, or the precursor, of hyperchlorhydria. Perhaps the colon, irritated by particles of what it considers to be insufficiently digested food, sends messages to the stomach to do the work better, and the stomach tries to obey. Such a reflex would at least seem to be common sense.

This combination of mild colitis and hyperchlorhydria has, in some cases that I have seen, been commonly followed by rheumatoid arthritis, again of a mild type. A joint would become acutely painful to movement for a day, or perhaps be merely uncomfortable for a longer period, and then get well, though some grating could always be elicited. These considerations have urged upon me the desirability of finding an intestinal antiseptic for use in "rheumatic" cases, and for this purpose I have been using mercuric chloride. I made considerable trial of this drug in hospital practice while salicylates were soaring in price, and it served me very well, though it still leaves much to be desired. In two or three cases it was wonderfully effective. One boy of about 16, suffering from subacute rheumatism, had been taking 10 grains of sodium salicylate thrice daily for six weeks or longer with very little improvement. His troubles promptly cleared up on changing the prescription to liq. hydrarg. perchlor., m.x.x., t.d.s. I also had some cases of "neuritis" that were promptly relieved. I have not tried big doses, because one did not want to risk mercurialism in hospital out-patients that one might not see for two or three weeks. I tried a mixture of calcium chloride, hydrarg. perchlor., and cascara for chronic rheumatoid arthritis and fairly good results were reported. Latterly I have given a mixture of sodium salicylate and liq. hydrarg. perchlor. as the two are not incompatible, and it seems to be an improvement on sodium salicylate alone. I may add that there was no reasonable ground for suspecting syphilis in the cases that improved on mercury. I merely give these clinical observations for what they are worth. It would seem that they may profitably be followed up.

Selections

The Cigarette and the Heart of the Soldier

It was a foregone conclusion that the conditions of the present war would bring into prominence various forms of heart affections. Of course, organic disease would disqualify a man from serving in the army, but there can be little doubt that in the circumstances of this war, and especially during the later phases, many with heart defects of a more or less serious character have been passed in, who, in the ordinary course of events, would have been at once rejected. However, it is not so much with the cases of organic disease that the discussions which have been taking place among the medical men of the warring European nations have been concerned, but rather with those cases which apparently have been developed by the stress of warfare. Sir James Mackenzie and several British physicians debated in the pages of the prominent English medical journals, the condition known as the irritable heart of soldiers and came to no definite conclusions. Undoubtedly, however, the nervous strain under which soldiers live had much to do with the development of the irritable heart as well as of other forms of heart affection. It was by some suggested that cigarette smoking, which habit is prevalent among a very large proportion of soldiers, might be a factor in the production of the irritable heart.

Dr. E. Kilbourne Tullidge, writing in the *Military Surgeon*, January, 1917, on the heart of the recruit and soldier, basing his remarks on his experience in the Austrian army, points out that in most of the cases of irritable heart, the symptoms developed suddenly, following some physical strain or stress of the campaign. In a number, chiefly younger men, the disturbance could be traced directly to the excessive use of tobacco, resulting in increased blood pressure and concomitant signs of a developing insufficiency. This, Tullidge thinks, is a strong indication, and an important one, that tobacco, notably cigarettes, should be restricted among the troops on active service. He believes that its use fulfills a much needed and sought after solace, but there is no question that it is carried to excess, with results that must necessarily weaken and lower the physical and

systemic resistance of the men. Tullidge states that excessive smoking was universal among the soldiers with whom he came into contact and that as a result not only were nervous phenomena of the heart observed, but catarrhal conditions of the mouth, throat, and pharynx occurred, with gastro-intestinal symptoms of every description. In the main he seems to agree with Mackenzie as to the non-pathological significance of the irritable heart of soldiers, but the point in his paper to which attention is especially drawn is that tobacco smoking, especially cigarette smoking, is largely responsible for these nervous cardio-vascular disturbances.—*Medical Record.*

Prophylaxis Against Pediculi

Reports from the battlefields of Europe indicate that not the least of the foes which help to make life a burden to the soldier in the trenches are the animal parasites which feast upon him. An English physician has in fact published a monograph on the subject calling them the "Minor Horrors of War," and going into detail in regard to their habits. His work is touched here and there with humor; indeed, for some reason the subject seems to many persons to be intrinsically facetious, although the soldiers themselves usually see the comical side of it some months after they have returned from the front.

Naturally many expedients have been tried to rid armies of this pest. The rigid cleanliness which excludes it from civilians and their households is not possible, of course, at the front, and instead dependence must be placed on chemical agents to destroy the invaders or to prevent the invasion. Many of these chemicals have been found impracticable on account of unpleasant physical characteristics, but an Italian physician has lately reported one which he claims is free from these disadvantages.

Dr Alfonso Muto, in an Italian periodical (*Annali d'Igiene*, August 31, 1916) advises a ten per cent. solution of creolin as an ideal chemical agent for this purpose. The clothing to be treated is placed in a wardrobe, the interior of which is connected by a pipe with a boiler containing the creolin solution, which is then boiled, the vapor permeates the wardrobe for about fifteen minutes and is then turned off; a quarter of an hour later the clothes are removed. They are unharmed by this process and the odor imparted is not disagreeable. The

protection lasts, moreover, for some little time afterward, as the process leaves minute crystals of naphthalin on them and these have a prophylactic effect.

If the above method is really all the discoverer claims for it it is certainly an unmixed blessing, not only for the relief from the mechanical discomforts inseparable from the entertainment of the pediculus, but also for the protection from disease, especially typhus.—*New York Medical Journal.*

Primary Infectious Jaundice with General Symptoms Predominating

M. Garnier (*Paris Medica*) points out that while in many cases of infectious jaundice the symptoms due to the cholæmia and the constitutional symptoms due to the infection are equally marked, in another group, catarrhal jaundice, the infectious symptoms are relatively much less pronounced, and in a third group which he has specially studied, these symptoms distinctly predominate. In a series of five hundred cases of primary infectious jaundice recently under observation, six were of the latter type. The onset was marked by chills, fever, backache, and at times mylagia, soon followed by gastro-intestinal disturbances, nausea, and vomiting, and sometimes diarrhœa. The temperature usually ranged between 28 and 39 degrees C., sometimes attaining 40 degrees temporarily; it often dropped at the time of appearance of jaundice. Discoloration of the skin, including that of the face, was only slight, the conjunctivæ being alone distinctly yellow. The urine showed the usual mahogany color. Elimination of urobilin in these cases was intense from the start. In this form of infectious jaundice, the system evidently utilizes with success all its resources for getting rid of the pigment. The elimination in the urine, and likewise the skin discoloration, was brief in these cases, terminating twice on the eighth day, and once each on the sixth, seventh, ninth and eleventh days from the beginning of the jaundice. All trace of conjunctival discoloration passed off simultaneously, soon after, or even before bile pigment disappeared from the urine, whereas in other forms of jaundice an interval of seven to twenty-four days elapsed. At no time in these cases did the fæces lose their dark brown color. The temperature usually reached normal three or four days

after the appearance of jaundice, but in two cases remained febrile until the jaundice disappeared. In one case a relapse took place. Attacks of angiocholitis in cholelithiasis might be confused with these cases, but in the former the onset is sudden and distinctly painful and jaundice appears with the first sign of malaise, the preicteric period being absent. That the form of infectious jaundice described by Garnier is actually of hæmatogenous origin was shown by hæmolysis test. In one case the A paratyphoid organism was found in the blood.—*Western Medical Review.*

The Milne Treatment of Scarlet Fever

M. del Prado y Lara (*La Cronica Medica*) considers that this method of treatment converts the disease into a benign condition, renders it noncontagious, shortens the duration, prevents complications, and renders quarantine unnecessary. The treatment consists of painting the pharynx and tonsils every two hours during the first twenty-four hours with ten per cent. phenol in olive oil; inunction of the entire body with oil of eucalyptus morning and evening for four days, then once daily for six days more; and surrounding the head and chest with gauze to prevent broadcast dissemination of infective particles by coughing.—*New York Medical Journal.*

Teeth in the Tongue

New diseases, remarkable discoveries, and bizarre stories float across from the scene of the great conflict. Trench nephritis, trench back, trench pyrexia, trench foot, the open air treatment of wounds, shell shock—these are some of the things that rise to our minds when we think of the Titans at grips in Europe. To be sure many of these marvels, when bereft of the illusion cast upon them by the war-laden atmosphere, we may recognize as old familiar friends others will be discarded as useless. A clinical curiosity which has recently come to our attention was reported in the *Policlinico* of October 29 last, by Dr. DeVecchis. He reports the case of a soldier who had been wounded two months before he came under observation; the bullet had entered the right masseteric region, traversed the cheek, carried away the right upper molars, and

pierced the tongue. While the other wounds healed promptly, the tongue remained sore and swollen. When examined by Dr. DeVecchis, a thickness in the swelling of the tongue extending clear across was found. The soldier complained of no pain, but there was a tenderness on pressure, and some serosanguineous fluid could be seen exuding from a small opening in the side of the tongue. On passing a probe, a hard, irregular object was touched which the surgeon took for a fragment of shell. An incision was made and to the surprise of everyone several teeth were extracted—from the tongue. Recovery was prompt and complete. Dr DeVecchis, who reports this case, is convinced that it is a curiosity. He believed that if the tongue had been left alone the teeth would have become gradually encysted, making what one might call a synthetic dermoid cyst.—*Medical Record.*

Ultra-Violet Light in Medicine and Surgery

F. Swanson Hawks draws attention to the useful possibilities of ultra-violet light in the treatment of war wounds. The work of Finsen in lupus is mentioned, and his endeavor to make use of the waves of shortest wave-length at the violet end of the spectrum. Ultra-violet light possesses direct bactericidal action, which is independent of temperature, also decided oxidation effects, generating ozone and nascent oxygen in the tissues exposed to it. It definitely increases metabolism, both local and general, and therefore promotes growth and repair of tissues. Immediate physiological effects are produced which suggest profound reflex action, probably by stimulation of peripheral nerves. It can be successfully used for skin diseases, different forms of ulceration, and open wounds: lacerated head wounds, which are especially difficult to keep clean, also do well with this form of treatment. Owing to its production of vasodilatation and an accompanying reduction in blood pressure, an effect which is of some duration, it is useful in cardio-vascular diseases. The author recommends a quartz lamp made by the Westinghouse Co., consisting of a short quartz tube which contains the arc.—*The Prescriber.*

Nutrition in Growing Children

The pale, underfed, listless child, a ready victim of "colds" and all the diseases that afflict childhood, is a common picture in our public schools, and truly deserves attention.

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Miscellaneous

Autumnal Ailments

The Autumn months constitute the season during which the average practising physician is called upon to treat the following conditions: 1. Typhoid fever, which is, more often than not, contracted at some unhygienic summer resort. The patient may return home during the first week or so, with headache, malaise, etc., or the premonitory or primary symptoms may appear after reaching home. 2. Malarial infection, in certain sections, which is more than usually rife in the Spring and Fall seasons. 3. The after results of the gastro-intestinal disorders of infants and young children, due to improper feeding, etc., during the heated term. In almost every instance, when the acute symptoms have subsided, a condition of anæmia and general devitalization is the final result that constitutes the essential indication for treatment. In convalescence from all forms of illness resulting in general debility, Pepto-Mangan (Gude) is the one ideal tonic and reconstructive. It not only revitalizes the blood, but also tones up every physiologic function. It stimulates the appetite, improves the absorptive capacity, increases energy and ambition and restores the blood to its normal condition. It is, thus, a general tonic and reconstituent of marked and certain value.

Fruit Juice for Atrophic Infants

Fruit juice, says Gladstone, *London Practitioner*, November, 1916, can be taken to the extent of a pint daily, with immediate benefit to a dyspeptic atrophic infant under 1 or 2 years of age. A carefully selected food low in albumin and fat and high in sugar, will then be both digested and absorbed and result in a gain of weight. At first a loss of weight must be expected, but, by the end of the first week, this is usually regained. Unless the juice is followed by a diet scientifically adapted to a weak digestion, it does no permanent good whatever. The juice, no doubt, acts partly on account of its reaction, rendering the bowel unsuitable for germs growing in an alkaline medium. It has a tonic, cleansing effect on the mucous

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membrane of the digestive tract, and is a diuretic, diaphoretic and general alterative. It supplies an attractive drink, enjoyed by all babies, containing 10 per cent. of soluble carbohydrate food, removes the irritability and restlessness of the child, promotes quiet sleep, and renders the digestive organs able to digest and absorb a light diet. While oranges were available, the juice was made of two parts of orange juice to one of apple juice, diluted with one quarter the quantity of water; the apple juice was obtained by shredding apples on a vegetable grater, and expressing the juice by means of a fruit press. Melon and apple juice has been used with somewhat less good results. Strawberry, cherry, raspberry and banana juices have been taken and enjoyed by the babies and did not produce any bad effects, and it is probable that any fruit juice available would succeed, provided the acid fruits were not used in too large a proportion, and that when oranges are out of season it will be found advisable to add a small quantity of lemon juice to the sweeter fruit juices, to supply the necessary acidity.

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Dissolve the soap in sufficient water to make, with the chalk, a thick paste, in which incorporate the cyanide. With this paste rub the blades well until the dust disappears and a polished surface is attained. The operation is rendered more rapid if the blades or other objects be soaked in kerosene over night and the surface rust scraped off with anything that will not scratch the blades. The deadly nature of the scouring paste must, of course, always be borne in mind, and the proper precautions always taken to protect the hands.—*Critic and Guide.*

Do not put too much faith in iodide of potash in the treatment of syphilis. Remember that it is mercury which cures syphilis.—*The Urologic Review.*

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A New Test for Syphilis

McDonagh has recently published a brief account of his new test for syphilis, which he terms the Emulsoid-gelation or Gel Test. The latter is as follows: If glacial acetic acid is added to blood serum, a syphilitic serum is readily identified through the rapidity of precipitation and resulting degree of opacity. Syphilitic sera contain much more protein nitrogen, more adsorber amino-groups, and more adsorbed electrolytes. The sulphate of a heavy metal (lanthanum in the test) is dissolved to saturation in the acid in order to cause a greater precipitating action.—*Proceedings Royal Society of Medicine.*

Lime Deficiency in Diabetes

Kahn (*Archives of Internal Medicine*) reports a clinical study of the effect of calcium on glycosuria and glycæmia in six cases of diabetes. The patients were kept on a standard diet for a period of three days during which the urine and blood were examined for glucose. On the same regimen the patient was afterwards intravenously injected with varying amounts of an eighth molecular solution of calcium chloride in normal salt. The glycosuria and glycæmia were then determined. In a number of cases, it was attempted to produce the calcium effect by the administration of calcium lactate or chloride by mouth, but the results were not so striking. The writer finds that calcium when given intravenously causes marked fall in the glycosuria and a gradual decline in glycæmia of diabetes. Acetone, diacetic acid and B-oxybutyric acid did not develop in any of the cases. The quantity of urine diminished and the symptoms were relieved.—*American Medicine.*

Electrical Treatment of the Wounded

It goes without saying that the present war has brought into play all the ingenuity of surgeons and physicians and all the resources of surgical skill and medical science. Full scope has been afforded for the trial of every method calculated to be of service in the treatment of injured or sick soldiers. Among the various means of relieving pain and of attempting to restore the use of impaired functions, electricity has not been overlooked. According to the judgment of those who have had

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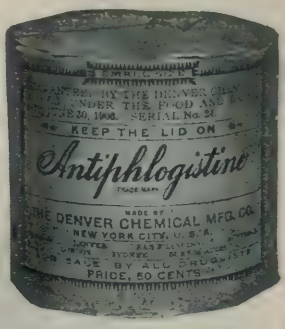

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experience in the employment of electrical measures with this object in view, the results have been satisfactory.

Dr. W. J. Turrell (*Lancet*), writing on the value of electricity from the standpoint of the wounded soldier, concludes as follows: 1. A considerable number of those who would otherwise remain permanently unfit can be rendered fit for general military service. 2. The severe pain of many of those wounded or injured by exposure in military service can be completely arrested or greatly relieved by these methods. 3. Electrical treatment is of great benefit in many of the less serious cases, often effecting a speedy cure and a quicker return to the fighting line. 4. Electrotherapy, fully and efficiently developed, will result in a very considerable reduction of the amount paid for state pensions, and, what is more important, will restore function to many crippled limbs.—*New York Medical Journal.*

Release of Liability for Negligent Treatment

A railroad fireman broke his leg, and the injured limb was negligently treated by the railroad's local surgeon. The fireman compromised his action against the railroad, the facts of the negligent treatment being known by him to exist, and the settlement was made with reference to them. He executed with his wife a blanket release to the road, reciting that it was a consideration of the payment of $8,000 for the injury received, including all claims for loss of time and services, support, and society, medical, surgical, nursing, hospital, and other expenses, and that the $8,000 was in full settlement of all claims of any kind. In an action against the local surgeon it was held that the release operated to discharge him from liability for the negligent treatment of the injured limb, since that was necessarily a part of the original injury. Complete satisfaction for an injury received from one person in consideration of his release operates to discharge all who are liable therefor, whether joint or several wrongdoers.—*Martin* vs. *Cunningham, Washington Supreme Court.*

In hereditary syphilis a very useful prescription is mercury with chalk. Mixed with sugar makes it still more acceptable to the little patient.—*The Urologic Review.*

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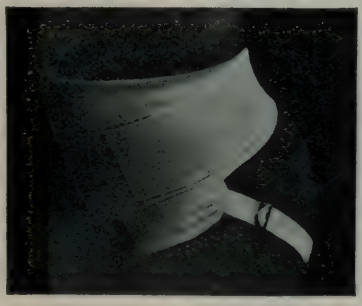

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The Hymen and Virginity

The old question as to the bearing of the hymen (which has been practically accepted by most forensic physicians as settled against the existence of a hymen being *per se* positive evidence of virginity) has been revived in a recent separate maintenance suit in New York based on "affectionate cruelty." Just what is meant by this term it is difficult to determine from the declaration or the evidence given. The plaintiff claims she is still a virgin although she has been twice married. Three physicians testified that the presence of a hymen justified this claim, but a fourth, called also by the plaintiff, testified that the matter could not be determined from examination alone. E. S. McKee of Cincinnati about 23 years ago pointed that many varieties of the hymen were compatible with coitus and that even prostitutes often had persistent hymens. W. C. Kellogg reports a case where a persistent hymen in a prostitute was a source of great pecuniary profit to the "madam" of a San Francisco brothel. The hymen evidence of virginity plays a large part in folklore and lies behind the religious belief that made old maids lead apes in hell. In many races girls are not allowed to die with the hymen unruptured lest they return and plague the young men. Hymen rupture, in some races, immediately after death has hence become a religious ceremony. Artificial rupture of the hymen, remarks Crawley, is a very widely spread custom. In the practice is seen the double idea of ridding the function of such difficulty as identified by the savage with a spiritual-material result, and of removing the first and, therefore, most virulent part of female contagion.

An important pre-marital religious service is defloration among Australian and African tribes like the Masai. Defloration is performed by the bride's father among the Sakais, Batas and Alfoers of Celebes. Such a folklore belief led an Illinois German farmer to rape two pubertal daughters in succession. Hymen defloration is a profession in the Philippines where the hymen has not been ruptured by an old woman usually employed for this. Defloration of the bride among some Eskimos is done by the angekok. Later, a belief results that contact of a holy person renders marital contact safe and thus insures fertility. When a central Australian girl arrives at puberty, the hymen is perforated by persons who vary according to tribal usage, but the prospective husband is never included. After perforation the assistants have ceremonial

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access in stated order. In some tribes the men of a division which cannot intermarry with the girl's division have this access. The object is to remove coitus dangers from the husband and sometimes from the wife by ceremonial rehearsal. The danger partly coincides with the apparent physical impediment. The act is twain; perforation and access. The men who have access do not do this as an expiation for individual marriage. It is a religious altruistic act, not a reminder that they, as communal or group husband, have as much right to woman as her groom. The fact that men sometimes of forbidden groups have access shows this. It is simply removal of danger by a proxy, as in other proxy marriages; here initiation and marriage are one.

In the New York case the wife claimed that she had lost weight by the "affectionate cruelty" of her husband in not rupturing the hymen. He claimed in a cross bill for annulment that she was a Narcissianist who smoked cigarettes while gazing at her nude form in a mirror; that she had adopted the superman notions of Nietzsche. She admitted she had read Nietzche and other philosophers, but was only able to name Socrates as among the others. While excessive demands for coitus have been decided to be cruelty by the Iowa Supreme Court, still here there is no evidence that the demands were excessive, but the nervous results were charged to failure to rupture the hymen. This any court would hold to be a remediable condition and not necessarily a cause of permanent impotency. The failure to raise the last question by the bride would seem to prove the husband's impotency albeit special pleading lawyers destitute of judicial qualities make some very queer pleas in marital and sex civil suits.—*The Urologic and Cutaneous Review.*

Hexamethylenamine Tetramine as a Fuel

An interesting communication to one of the American journals deals with the discovery of the very practical use that the well-known drug, formerly termed urotropin, can be put to. Dr. Snow, of Los Angeles, has found that if anybody is in want at any time of a smokeless flame such as would be given by an alcohol lamp, ten grains of the drug will provide a very satisfactory substitute. For boiling small quantities of water, such as a test tube would contain, two five-grain tablets, which

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many practitioners carry with them, will give a good flame when ignited. The use of this happy discovery is quite obvious, as many are the occasions when a clean flame would save a great deal of trouble, and when a diagnosis could be clinched by the boiling of a specimen of urine, which under other circumstances would have to be done at home.—*Medical Press and Circular.*

Cancer of the Rectum

One of the most serious as well as one of the most interesting surgical problems is the choice of methods in dealing with cancer of the rectum. It is serious because when unrelieved the disease leads surely to slow death, usually accompanied by much suffering. It is interesting because so many considerations are involved which influence a decision as to whether any operation is indicated either palliative or radical, and if so, what. The first of these considerations is the location of the area involved by the cancer, and the forms of the metastases: the second is the extent of the local disease and the associated local or general disease. Obesity increases the risk. The decision as to a palliative or radical operation will be influenced also by freedom from contact dissemination or grafts at a distance within the abdomen.

The intelligent patient usually inquires whether there is any other way of treating the disease than by surgery. If not, he wishes to know the operative risk and the prospects of cure; whether he will retain control of his bowels, and whether the new opening will be behind or in front? Among other methods of treatment, the use of radium is making great strides in the treatment of cancer, but at the present time it is limited to particular cases of local involvement, or to inoperable conditions. Radium treatment can hardly be classified in elective cases as being in any way in competition with the surgical treatment of cancer of the rectum except for epithelioma of the anus.—Chas. H. Mayo, *Annals of Surgery.*

Some physicians seem to delight in being sarcastic, with more or less bitterness in the sarcasm. We remember that some years ago one physician taunted another, one who was trying to confine his practice to skin diseases, by saying that

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he was one of the broadminded dermatologists who treated the skin and everything in it, whereupon the other retorted "yes," and that the gentleman who made that remark was a gynæcologist who treated the womb and everything that comes out of it. The audience called it a draw. Which leads us to say that every specialist, no matter in what branch it may be, should be grounded in the general principles of medicine and should also be an expert in therapeutics as far as it lies in his power. For every specialist must have the broad principles of general medicine at his command as an aid in his chosen practice and as a hope to obtain results which he will not otherwise attain without such valuable help and assistance.—*The Urologic Review.*

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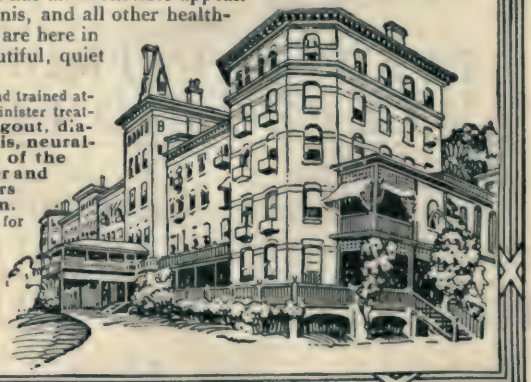

The Canadian Practitioner and Review

Vol. XLII. TORONTO, APRIL, 1917 No. 4

Original Communications

HYDATID OF THE LUNG—REPORT OF TWO CASES

F. Arnold Clarkson, M.B.
Assistant Physician, Western Hospital, Toronto.

Hydatid cysts of the lungs occur in this part of Canada so rarely that they are always worth recording when the diagnosis is made. The two following cases are the only ones that have been entered in the records of the Toronto General Hospital for the last ten years:

Case 1.—A. D., a Macedonian, aged 18, was admitted on April 14th, 1912, complaining of pain, cough, and shortness of breath, which began two weeks ago suddenly, and with a chill. Respiration 46, temperature 101 degrees, and pulse 100.

Physical examination of the left lung showed a rounded and circumscribed area of dullness, extending from the 2nd to the 6th rib, and from the mammary line in front to the internal angle of the scapula behind. There was some superficial resonance over this portion of the chest on light percussion. The breath sounds were distant, and the vocal resonance much diminished in this locality.

The rounded area of dullness and the shape of the shadow by the X-ray suggested a cyst. On introducing a needle, 510 c.c. of a clear, limpid fluid were drawn off, which, on examination, showed slight traces of albumin and many heads and hooklets of the echinococcus.

On admission, the blood count showed 23,000 whites, rising to 28,000 on the 17th, but there was never any increase in the eosinophiles. The temperature, too, went as high as 105 de-

grees, so that the serious condition of the patient demanded surgical interference at once.

At the operation, a large cyst of about 12-ounce capacity was rather easily removed. It contained many daughter cysts. The recovery was slow and tedious, a sinus persisting for a long time. The patient was ultimately discharged on July 7th, in fair health.

Case 2.—An Italian laborer, aged 25, was admitted to the General Hospital on June 15th, 1914, complaining of severe pain on the left side, increased on coughing. The onset was sudden, accompanied by a definite chill. Temperature 102, respirations 30, sputum bloody.

Examination of abdomen and right chest, negative. The left chest was decidedly limited in its movements, particularly in the lower quadrant. Anteriorly the percussion note was clear; posteriorly, however, there was an area of absolute dullness, the upper border arching upwards. Above this, there was relative dullness as high as the 5th rib. The heart was slightly displaced towards the right, but was otherwise normal.

Screen examination showed the diaphragm on the left side to be 8 cm. below the nipple, immovable but arched. The costophrenic angle was clear. In the middle portion of the left lung towards the base, was a large rounded shadow which did not move on respiration.

As in Case No. 1, the peculiar shape of the dullness aroused the suspicion of a cyst; and on aspiration, 25 c.c. of a clear fluid, under slight pressure, was removed. This was of low specific gravity, containing a slight trace of albumin and no hooklets.

Apparently this simple operation was all that was necessary to restore the man to health, for his temperature fell and he was soon up and about. The X-ray examination, however, revealed the same round shadow in the base of the lung. The diagnosis, when he left the hospital, was echinococcic cyst, with a circumscribed pneumonia, probably caused by a small leak in the cyst.

The patient went back to work and failed to report till April 6th, 1915, when he was admitted to the Western Hospital, suffering from a troublesome cough, with much sputum. He also had a severe pain in the left side, of much the same nature as on first admission. T. 102.4, P. 100, R. 28.

Physical examination showed a muscular man in splendid condition. Cheeks flushed; respiration labored.

Chest.—Movements restricted over lower left quadrant and vocal fremitus absent over the same area. Absolute dullness below the 7th rib anteriorly including Traube's space. Posteriorly, beginning at the level of the 7th dorsal spine, there is an area of relative dullness which arches downwards and outwards to meet the horizontal line in front. Below this the note is absolutely dull. No Grocco's triangle on right side. Over this dull area the breath sounds are absent. No adventitious sounds. Heart is normal in size and position. Exploratory puncture in the 9th space post-axillary line yielded 1 c.c. of fæcal-smelling pus, in which staphylococci and bacilli were found. White blood cells 9,000, few eosinophiles.

Knowing the previous history of the patient, the diagnosis was an infected hydatid cyst. He improved rapidly in bed, and by April 21st his temperature was normal. The pain in his side, however, was still severe, so he was referred to the surgical side.

On May 6th a portion of the 9th rib was resected in the posterior axillary line. At some distance from the surface the surgeon found a cyst full of stinking pus, the walls of which were thin and gelatinous in structure and came away piecemeal. No daughter cysts were obtained, but the search was unsatisfactory owing to the condition of the patient, who stood the operation badly, coughing up large portion of the cyst wall and quantities of blood. The consistency and appearance of the wall were so strikingly like that of patient No. 1 as to leave the diagnosis in little doubt.

After a rather slow convalescence, he made a good recovery, the function of the left lung being apparently fully restored. In the autumn of the same year he heard the call of his country, and joined the Italian colors.

Comment.—Stereoscopic plates of the chest would make the location and character of the cyst almost certain. In the absence of these, the fluoroscope gives the greatest assistance, being practically responsible for the diagnosis in both these cases.

The acute symptoms which brought both these patients to the hospital were due to what must be termed pneumonia, for want of a better term. Probably some of the cyst contents leak out through a small opening and set up a pulmonary inflammation, the clinical symptoms of which are hard to differentiate from true pneumonia.

THE RADIUM TREATMENT OF MALIGNANT DISEASE OF THE LIP AND SKIN

By Dr. W. H. B. Aikins, Toronto.

The treatment of malignant disease of the lip and skin may be considered from several points of view. Cancer of the skin, more particularly when it involves the lower lip, frequently attains a high degree of malignancy, and appears to be a regional rather than a local process, the neighboring glands being usually affected. As it is generally preceded by a pre-cancerous lesion of some kind, such as a scaly spot, excoriation, wart or mole, it follows that the persistence of such lesions for an unduly prolonged period should excite suspicion, and lead to the adoption of prophylactic treatment, in which radium applications are of great value.

Until comparatively recently the best routine treatment of cutaneous epithelioma was by an early operation, and in this way it is possible to remove the growth in many cases. In epithelioma of the mouth and lower lip, however, the diagnosis is seldom made before the adjacent lymphatics are involved, and anything like complete excision is therefore impossible, in a large number of cases, owing to the extent of the growth and the nature of the tissues invaded. The frequency of early metastasis in these cases will be apparent from Murphy's statement that "in a series of cases of epithelioma of the lower lip 52 per cent. without demonstrable metastasis at the time of operation, and 76 per cent. of those who showed enlargement of the glands at the time of operation, subsequently died of cancer."

Since the introduction of radium into the field of therapeutics, treatment by radium rays has come to be the method of choice in cutaneous epithelioma. Amongst its advantages are the ease of application and lack of discomfort to the patient with which it can be applied, the complete destruction and eradication of the cancer cells, the stimulus to healing induced by the rays, and the excellent cosmetic results, which are far superior to those after operation or caustic applications, which leave a large and retracted scar.

Epithelioma of the skin seems to form an exception to the general rule that operable cancer should be operated upon, as in many cases the better cosmetic results and the comparative infrequency of recurrence after its use, render radium treatment preferable to surgery, and many are now of opinion that operation should be undertaken only in exceptional cases.

Before applying radium, however, it is now my invariable practice to curette away as much as possible of the cancerous tissue.

In a recent paper Dr. Frank E. Simpson discusses the difference in the action of radium and x-rays. Both have a selective and inflammatory reaction. In regard to the x-rays the former is much the most important, there being considerable risk in the systematic production of a destructive inflammatory reaction by them. Radium on the other hand, when used with proper precautions, is a valuable destructive agent, and it has been proved conclusively that it is capable of destroying the epitheliomatous tissue. As our object in treatment is to completely eradicate every cancerous cell, and nothing short of this is likely to be effective in preventing recurrence, this destructive action of radium is of the greatest significance in this connection, more especially in view of the frequency of recurrence after surgical operations, even when they include wide removal of the adjacent tissues. From a cosmetic point of view also it is preferable to surgery in many cases, in which operation would entail considerable disfigurement and mutilation, such as epithelioma in various parts of the face.

Observers everywhere are now agreed that radium is the ideal method of treatment in cutaneous cancer, and during the twelve years which have elapsed since its introduction evidence has continued to accumulate as to its remarkable efficacy in these conditions. The results in some of the cases reported have been simply marvellous, and cases in every stage of the disease, even the most advanced, have yielded to treatment, sometimes after proving refractory to all other methods.

Dr. W. B. Chase reports a case in which an extensive epithelioma of the face disappeared after three applications of radium, as did also another affecting the face and another the hand. In large cutaneous epithelioma he plunges needles containing radium into the growth. He has found this form of treatment beneficial in several cases, and is of opinion that

it is likely to prove preferable to other methods. A case of mammary epithelioma in a woman of 80, entirely disappeared after it two years ago, and has since remained perfectly healthy.

Dr. Riddell reports a case of epithelioma of the right temple in a man who had suffered from lupus for twenty-five years, and had x-ray treatment for seven years. A recurring fungating growth was treated by two applications of radium with good results, and up to the time of writing there had been no recurrence.

In a case reported by Dr. Russell Boggs the growth had its origin over the bridge of the nose, involved the canthus, and was destroying the lower lid and conjunctiva. He states that healing is so perfect that it is difficult to believe that such a condition has ever existed.

Dr. McCurdy's statement that one of his cases is a "wonderful triumph for radium" certainly cannot be disputed. The epitheliomatous mass involved the entire chin on both sides. The mass was honeycombed with ulcers discharging pus, and the lower lip almost completely destroyed. The condition improved after three or four applications of radium, and six months later there remained only slight induration below the left angle of the mouth and a small ulcerated spot, both of which lesions were rapidly disappearing. The improvement subsequently continued.

An experience of several hundred cases has convinced me that no other agent can compare with radium for the treatment of such lesions. Small rodent ulcers respond almost magically, whilst other more extensive cases, which are of several years' duration, and have resisted all sorts of therapeutic measures, including the x-rays, incision, and various methods of physical therapy, have also been favorably influenced by radium.

The case reported was not only a retractable epithelioma of long standing, but in addition presented certain other characteristics, which render it of special interest at the present time.

On May 22nd, 1915, Dr. A. T. Emmerson of Goderich referred to me for Radium Treatment a patient with the following history:

He was a man of 61 years of age, at present a mill-hand, but had formerly seen service in the British Army. Eight years previously an ulcer had appeared on his right temple,

which had gradually increased in size, and at the time he came to me there was an ulcerated area, roughly circular in shape, extending from the anterior margin of the auricle to half an inch beyond the outer margin of the orbit (three inches), and from the hair margin above down for two or three quarters of an inch to a point opposite the lower margin of the external auditory meatus. The margins of the ulcer were elevated, and its base irregularly covered with granulations, from which a sero-purulent discharge exuded (Fig. I). It proved to be a typical cutaneous cancer.

A radium plaque 4 centimetres square containing one centigram of radium element was applied over the ulcer, remain-

Fig. I.

ing *in situ* for twelve hours. The posterior portion of the ulcer, where the thickening of the edges was most marked, received an exposure of twenty-four hours.

The patient was sent home after receiving instructions to dress the ulcer with boracic acid compresses. Six weeks later he came to see me again, presenting the appearance seen in Fig. II. The edges of the ulcer were soft and flattened, except anteriorly, where a slight elevation still persisted. The ulcer had healed with the exception of an area in the centre, one square inch in diameter. The part over which complete epi-

thelialisation had not yet taken place presented the appearance of a clean, healthy ulcer.

The treatment given on this occasion was the application for fourteen hours of the same radium plaque covered by two millimetres of aluminum. In the anterior portion, where slight thickening persisted on the margins of the older ulcer, a smaller plaque, of similar relative strength, was applied for fourteen hours.

The patient was asked to report again at the end of another six weeks, but failed to do so, and no further information was received until November, 1916. Dr. Emmerson then

Fig. II.

wrote to me with regard to a similar case, and in his letter referred to the results obtained with the first patient. I cannot do better than quote from it:

"Mr. F. told me that you had taken a photograph of his face each time he went down. If that is so, then they would be complete if you had one of his face as it is at present time. He is with one of the battalions that is going, or is now on its way overseas. I had him go to a photographer, and he has taken a picture which I send you under separate cover. He did not retouch the negative, thinking it would be better not for the purpose for which you might require it. The picture

does not do justice to the healed part. You can understand that the surface is more or less uneven, also there are one or two large veins running across it. These have given shadows, which account for the unevenness of the picture. The result is excellent, and the skin over it is becoming firm." (Fig. III.)

This report was certainly most gratifying. The fact that the ulcer had completely healed was in itself a cause for great satisfaction, but the additional information that the patient had passed a Medical Board as "fit" for service in the Can-

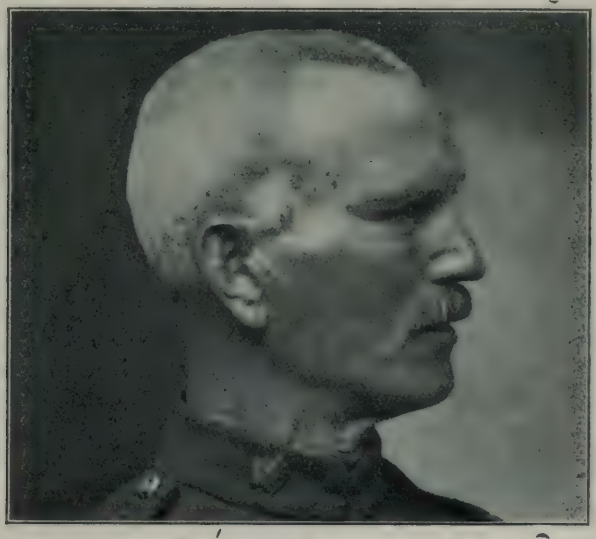

Fig. III.

adian Expeditionary Force considerably increased my satisfaction, and adds a peculiar interest to the case, which has led me to publish it.

It now seems to be the general opinion that in epithelioma of the skin we have one of the most promising fields for radium therapy, which often succeeds when other measures have failed to give relief.

Cases have been recorded in which the use of radium has resulted in improvement, even when metastasis has occurred before the patient comes under observation. Dr. Casper Gilchrist (*Maryland Med. Jour.*, July, 1915, 157) reports three

cases of the kind. In the first a man of 65 suffered from epithelioma of the wrist, with extensive metastasis to the upper lip and adjacent region. Treatment resulted in healing of the lip and clearing away of the primary cancerous deposit in the wrist, with great improvement in the general condition. In the second case there was epithelioma of the bridge of the nose, with metastasis to the left side of the neck. There was marked improvement, but the patient subsequently died of pulmonary embolism. In the third case there was an epithelioma of the lower lip, with metastasis to the cervical glands and subsequently to the sternum. After treatment by radium the patient was discharged as clinically cured.

All writers on the subject emphasize the importance of giving prophylactic doses of radium at intervals after apparent cure, and of keeping the cases under observation for a prolonged period, with the object of detecting recurrence at an early stage.

Bibliography.

1. Gilchrist, Dr. C., *Maryland Medical Journal*, July, 1915, pp. 157.

2. Boggs, Dr. R., *Radium*, November, 1916; p. 39. *Interstate Medical Journal*, 1916, Vol. XXIII, No. 5.

3. Chase, Dr. W. B., *Medical Record*, New York, 1916, XC. 410.

4. Jackson, Dr., *Radium*, May, 1916, p. 43.

5. McCurdy, Dr., *Maryland Medical Journal*, July, 1915, p. 157. Discussion.

6. Simpson, Dr. F. E., *Journal American Medical Association*, November 18, 1916, p. 1508; *Radium*, December, 1916, 45.

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Editorials

THE HEALTH OF THE ARMY

Lieut.-Col. G. G. Nasmith delivered an interesting address in the Central Y.M.C.A. Building, March 13th. He said the British Army in France was the healthiest in the world. Among the reasons for this satisfactory condition, he referred especially to three things: 1. The purification of the water. 2. The elimination of milk. 3. Inoculation. The field laboratories, of which there are 25, are being used for the first time in any war. The British Army at the present time has no epidemic of any account. In many places the water has been chlorinated—often, to such an extent that it is very unpleasant to drink; and some of the soldiers are wicked enough to say they would rather take the germs than the chlorine.

The Medical Officers are constantly on the lookout for " carriers " of diseases. When one of these is found, he is immediately sent back to the Base Hospital and kept under observation for some time.

QUEEN'S UNIVERSITY

We are glad to announce that Dr. James Douglas, of New York, Chancellor of Queen's University, has agreed to give the sum of $100,000 towards the fund " to aid facilities for further work in various directions " in Kingston General Hospital. It is hoped that the City of Kingston, the Counties of Frontenac,

Lennox and Addington, and Queen's University itself, will all contribute liberally in adding to the fund.

The desire of those interested is to make the Hospital the best in Ontario outside of Toronto.

The joint committee, composed of members of the Medical Faculty, Board of Governors, and members of the present Hospital Medical Staff, have chosen an architect to examine the present building and grounds, draw up plans and give estimates.

Dr. J. G. Wright will probably have charge of the X-ray Department.

WORKMEN'S COMPENSATION ACT

Some important amendments to the Workmen's Compensation Act were passed recently in the Ontario Legislature. As a result of the changes, the Compensation Board will defray all the medical, surgical, hospital and nursing expenses of injured workmen for 30 days after the accident. The Act, as amended, also prohibits employers from levying upon employees for this object except where employers have a first-aid organization acceptable to the Board. The money will be taken from the Board's Accident Fund.

It is now generally believed that the Act, upon the whole, has already accomplished much good, particularly by the financial relief to many injured workmen and their families, and to the families of deceased workmen.

Most employers now consider that the legislation is a benefit to themselves as well as to the workmen.

Through it they are relieved from much annoying litigation; and the workmen, as a result, are more content and efficient.

THE CANADIAN TUBERCULOSIS ASSOCIATION

We have received from the secretary, Dr. George Porter, the Sixth Annual Report of the Canadian Association for the Prevention of Tuberculosis, with transactions of the annual meeting held at Quebec, September 12th and 13th, 1916.

Dr. P. H. Bryce, in one of the discussions, related an interesting incident in the year 1894. He interviewed Sir Oliver Mowat, Prime Minister of Ontario, on behalf of the Provincial Medical Board in 1894. The Premier was asked to give an Order in Council making notification of tuberculosis compulsory. The Premier replied: "You impress me greatly with your arguments. I recognize what is necessary to be done in this case. You must not let them go near other people. But will you tell me, gentlemen, what you are going to do with them when you receive notification?" That was the question, from this acute legal mind, "are you going to put the sick people, who are in boarding-houses, out on the street?" We did not answer, because we had no place to put them then, but now we have 35 places for them in the Province of Ontario.

A rather singular report came in from Winnipeg, or at least something that was called a report. It said: "We regret to inform you that we have no report of the Winnipeg Association for 1916. The City of Winnipeg has taken over the Society's nurses, and

the feeling of the committee is that no active work, or subscriptions, should be solicited in view of our country being at war." We understand they hoped that consumptives would move out and not come back to the country until the war was over.

MEDICAL HEALTH OFFICERS

It is generally considered, by those well versed in sanitary matters, that a Medical Officer of Health of any municipality should not be removed from his position by the Local Council except for "cause." Permanency gives him a better chance to act without "fear or favor." As the law now stands, the council cannot dismiss a Health Officer without the consent of the Provincial Board of Health.

Mr. William McDonald, M.P.P., North Bruce, moved (March 7th) in the Legislature that the Act should be so amended that the municipalities should have the power to discharge a Health Officer at any time. In speaking on his motion, he protested generally against undue centralization of authority.

The Provincial Secretary, Mr. McPherson, refused to accept the principle involved. The clause in the Act which was objected to was the keystone of the present system of safeguarding the public health, since it made the local officer independent of local things, and left him free to carry out his duties in the most efficient manner.

Mr. Irwin Hilliard, M.P.P., Dundas, proposed that a clause should be introduced into the Act giving the County Court the right to decide any causes of dis-

pute between Health Officers and the municipalities in regard to remuneration.

We do not know that there will be any special legislation in this direction at present. It is thought by many that the Provincial Board of Health should decide, but we are inclined to favor strongly Mr. Hilliard's proposal that the County Judge should decide in all such cases.

News Items

Medicated Wines

The *Canadian Pharmaceutical Journal* in referring to medicated wines says the manufacturer should be compelled to state the quantity and percentage of alcohol in each bottle.

Measles Hospital

Dr. Hastings, the M.O.H., of Toronto, hopes that a Hospital for Measles will soon be erected in Toronto at a cost of $75,000. It was hoped by some members of the Council that the old Jail building might be utilized for that purpose. Dr. Hastings thinks a new building is preferable, and might be built on the jail grounds. At the same time he thought the jail building might be used as a home for the Isolation Hospital nurses.

Drinking Water on Lake Vessels

The Lake Carriers' Association, of Detroit, has been notified regarding new and stringent regulations governing the supply of drinking water on vessels. Seven hundred boats must instal purifying apparatus before they can sail after the opening of navigation.

The somewhat notorious "Professor" Feige was for a time the physician of Honorable J. R. Stratton, of Peterborough, during his last illness. Mr. Stratton, who went to Hot Springs to be treated by the professor, had diabetes. His treatment was by starvation, which he sometimes carried out with such thoroughness that his patients died from the starvation, not from the disease. After the death of one of his patients he was arrested, March 12th, on a charge of manslaughter.

It was reported some time ago that the three Canadian Units in the Salonika area would be recalled within a short time, but up to the middle of March they had heard nothing further about the matter in the University Hospital. The authorities had put in the following qualifying clause, which Dr. Hendry (Col.) thought a little indefinite, that is " Recalled if and they can be replaced."

Hoffmann's Anodyne

One of the popular drinks now is Hoffmann's Anodyne. It is said that a little tincture of ginger, and a little of Hoffmann's "knock-out drops" added to a bottle of beer will make quite an exhilarating drink. Witch hazel water is also becoming rather popular. Another drink which is said to resemble absinthe is made from paregoric.

Honest druggists are much perplexed as to what they should do, and would like the prescription committee to give them some definite instructions, but the committee appears to be as much perplexed as the druggists.

Long Hours for Munition Workers

A rather remarkable statement appeared in a Toronto daily paper, March 16th. It gave the name of Mr. T. A. Stevenson, Secretary of the Trades and Labor Council, as the author of the following statement: "The munition workers are expected to work seven days a week and about 16 or 17 hours a day. Mr. J. W. Flavelle, the Chairman of the Munitions Board, refused to listen to us."

Surely there must be something wrong about such a statement. The Chairman is a practical man and knows much about workmen. It was particularly proven in the investigation by a committee in England that men cannot work efficiently sixteen hours a day for seven days a week.

The Department of Militia and Defence have just announced that for the twelve months ending December 31st, 1916, 167 cases only of typhoid fever were reported as having occurred amongst the many thousands of men of the C. E. F. in Canada, and this, notwithstanding the fact that typhoid fever is a disease especially affecting young adults from seventeen to thirty years of age, and a disease which is endemic in all parts of Canada.

This comparative freedom on the part of the C. E. F. is seen to be most striking when it is recalled that, during the Boer War, one man out of every nine in the British Forces in South Africa was invalided through this disease, and that in the Spanish-American War, of 107,000 men in the camps at

Tampa, Florida, and elsewhere, who had not left the shores of the United States, 20,000 contracted the disease. The remarkable change can only be attributed to the process of inoculation.

The Provincial Board of Health for Ontario has supplied to date all the typhoid and paratyphoid vaccine used by the entire Canadian Expeditionary Force (about 450,000 men). In all, nearly 600,000 doses have been supplied free of cost.

There are 1,800 officers in the Canadian Army Medical Corps.

There were 580 patients in the Base Hospital, Toronto, March 12th.

Bishop Fallon has offered St. Joseph's Hospital, London, with its eighty beds, to the Military Hospital Commission.

Mr. W. K. George says that the medical work of caring for returned soldiers will be restored to the Canadian Army Medical Corps.

Letters received from Drs. Royce and Lowry indicate that things are running smoothly in the University Hospital. They treated between them over 3,700 patients during the last year.

Various reports are in the air regarding Colonel Marlow, but according to the latest he is likely to be retained in Canada. We think we need him more here than they do at the Front.

Mrs. G. R. R. Cockburn, of Toronto, left the following bequests: To the General Hospital, $5,000; the Sick Children's Hospital, $2,000, and to the National Sanitarium $2,000, to endow a cot to be known as the "Major Cockburn, V.C., Cot."

Dr. Chas. J. Hastings in speaking to the Board of Control at a recent meeting advised that legislation be applied for to increase the penalty for light weight bread from $5.00, which is practically nothing under the circumstances, to $50 or $100.

It was reported early in March that Lieut. Geoff Machell, son of Dr. H. T. Machell, Toronto, who contracted trench fever while fighting at the Somme, had recovered. This, unfortunately, was not quite true, as he was invalided home, and it was reported that he reached Halifax on March 22nd.

ONTARIO MEDICAL ASSOCIATION

The thirty-seventh annual meeting of the Ontario Medical Association to be held at Toronto, May 30th, May 31st, June 1st, 1917.

PROVISIONAL PROGRAMME.

Wednesday, May 30th.

10.00 a.m.—Meeting of committees.
11.00 a.m.—Business meeting.
12.30 a.m.—Luncheon in building.
2.00 p.m.—General session.
Symposium on Venereal Diseases—Drs. Connell, Begg, Goldie, Hair and others.
Address in Gynæcology, Dr. Chipman, Montreal—"Treatment of Prolapsus Uteri."
4.00 p.m.—Garden party.
8.00 p.m.—General session.
President's address.
Address in Medicine, Dr. Christian, Boston—"Nephritis and Diuretics."

Thursday, May 31st.

9-12 a.m.—Meeting of sections.
2.00 p.m.—General session.
Address in Surgery, Dr. W. W. Babcock, Philadelphia—"The Evolution of the Surgery of the Biliary System."
Laryngectomy—Dr. McKenty, New York.
3.30 p.m.—Business meeting.
4.30 p.m.—Garden party.
8.00 p.m.—Evening session.
"Recent Advances in the Operative Treatment of Intracranial Conditions"—Dr. William Sharpe, New York.

Friday, June 1st.

9-12 a.m.—Section meetings.

Section in Gynaecology and Obstetrics.

Demonstration of the right oblique diameter in midwifery—Dr. McCabe.
Treatment of Fibroids—Dr. Angus McKinnon.
Ligamentous suspension with intra-abdominal treatment of cystocele in uterine prolapse—Dr. Klotz.
Some points in the pathology of the endometrium—Dr. B. P. Watson.
The toxæmias of pregnancy—Dr. Frawley.
Cæsarean section—Dr. McIlwraith.
Retained Placenta— Dr. W. J. Mabee.
Other papers are promised by Dr. Holmes, Dr. Oliver, Dr. Ernest Williams.

Section in Surgery.

Varicose veins—Dr. E. R. Secord.
Mortality incident in surgery—Dr. J. K. McGregor.
Surgical treatment of gastric ulcer—Dr. D. C. Balfour.
Post-operative treatment in abdominal cases—Dr. I. Olmsted.
Gastric stasis, its clinical significance—Dr. W. J. McDonald.
The cystoscope, an essential in genito-urinary surgery—Dr. Colin L. Begg.
Exophthalmic goitre—Dr. H. Lackner.
Surgical kidney—Dr. Mowbray.
Suprapubic prostatectomy—Dr. N. H. Beal.

Section in Medicine.

Radium in Internal Medicine—Dr. F. A. Clarkson.
Gonorrhœal septicæmia—Dr. Stobie.
Blood urea—Dr. Campbell.
Cyclic vomiting—Dr. J. Loudon.

Other papers have been promised by Drs. W. P. Caven, Minns, Bates, McPhedran and Richardson.

The section in ear, eye, nose and throat has also arranged a good programme and exhibition of cases.

PRESENTATION OF PORTRAITS TO THE ACADEMY OF MEDICINE

The President of the Toronto Academy of Medicine, Dr. John Ferguson, has presented the following portraits to the Academy:

Galen (131-201 A.D.), the greatest Greek physician after Hippocrates, was the founder of experimental medicine. He was a versatile and widely read man rather than a genius like Hippocrates. He believed that pus was the natural method of the healing of wounds, and it was he who first called this "healing by second intention."

Leonhard Fuchs (1501-1566), was born in Bavaria. He was a distinguished botanist and paid great attention to that subject in his early life. He afterwards paid special attention to medicine, and was made Professor of Medicine in the University of Tubingen in 1535, and held that position until his death in 1556.

Sir Samuel Garth was both a physician and a poet. He was educated at Cambridge, taking M.A. in 1676. He became a member of the College of Physicians in 1691.

Jean Astruc (1684-1766), a noted French physician, was for a time Professor of Anatomy in the University of Toulouse, and afterwards was Professor of Medicine in Paris.

John Brown (1735-1788), was one of the long line of Browns famous in Edinburgh history.

William Mudge (1721-1793), a distinguished English physician who first used the inhaler for curing catarrh colds. He is spoken of in Boswell's "Life of Johnson" as the "famous physician."

Joseph Black (1728-1799), Professor of Chemistry for many years in the University of Edinburgh.

William Buchan (1729-1805), a noted Edinburgh physician who wrote that book so well known in the middle of last century and even later, "Domestic Medicine."

Johann Christian Reil (1759-1813), fairly well known because of that part of the brain which bears his name, "The Isle of Reil." He was for a time Professor of Medicine in the University of Halle, and afterwards in the University of Berlin.

Sir Hy. Halford (1766-1844), a distinguished physician who graduated from Oxford, B.A. in 1788, M.D. in 1791. He was physician in turn to George IV, William IV and Victoria, and was President of the Royal College of Physicians during the last twenty-four years of his life.

Benjamin Travers (1783-1858), one of Sir Astley Cooper's pupils and afterwards a distinguished surgeon.

Sir Benj. Collins Brodie (1783-1862), led the profession in London for forty years, and was a pioneer in subcutaneous surgery. He held firmly to the view that the main duty of a surgeon was to save limbs, not remove them.

Michael Faraday (1791-1867), made many important discoveries in heat, light and electricity, and from him we have the term "faradaism." He was for a time Sir Humphry Davey's assistant.

James Wardrope (1782-1869), a Scotchman. He graduated from Edinburgh University, but practised surgery most of his life in London.

Benjamin Ward Richardson (1826-1898), well known on account of his early connection with *Preventive Medicine*.

"The Alchemist," a beautiful old engraving which is now very rare.

Vaginal Delivery after Caesarean Section

Nathaniel R. Mason (*Boston Medical and Surgical Journal*, January 25, 1917) states that he does not believe that the scar produced in the uterus by a Cæsarean section weakens the wall to such an extent as to make rupture of the uterus a grave danger in the event of a subsequent pregnancy and labor. On the contrary, he reports a number of cases in which pregnancies subsequent to Cæsarean sections were terminated by normal labors, and maintains that the patient who has had that operation properly performed for some cause other than a pelvic indication may be subjected to a future pregnancy, labor, and vaginal delivery with safety, so far as the Cæsarean scar is concerned, provided that her convalescence has been afebrile and free from uterine infection.—*N. Y. Med. Jl.*

Personals

Dr. John McCollum left Toronto January 21st for A.M.C. work, overseas.

Dr. T. Alex. Davies, 578 Sherbourne Street, went to Atlantic City about the middle of March.

Col. George Rennie, M.D., Hamilton, has been appointed Medical Director at Shorncliffe.

Col. Shillington, M.D., Ottawa, is Officer in Command of the Kitchener Hospital at Cliveden.

Dr. Beverley Milner announces that he will in future confine his attention exclusively to general surgery.

Col. Perry Goldsmith, M.D., Toronto, has been appointed President of the Officers Standing Medical Board.

Capt. Fred Nicolle, M.D., who was at the front for some time, has returned to his home on account of ill-health.

Drs. R. D. Rankin and R. H. Turnbull, both Captains, have retired from the Army Medical Service on account of ill-health.

Colonel Jno. T. Fotheringham had an attack of influenza in France on January 11th. He recovered in about two weeks.

Dr. George McDonagh, of Toronto, left home for his annual winter holiday, December 26th. He expected to go first to Jamaica.

The degree of LL.D. will be conferred on Professor W. H. Ellis of the University of Toronto by McGill University at Convocation in May.

Colonel J. B. Reed, M.D., who went Overseas with the first contingent was back in Canada on leave in March. He visited relatives in Toronto, March 9th.

After twenty years' service in the New York Department of Health Dr. Billings has resigned.

Dr. Herman M. Biggs, Commissioner of Health, New York, who is well known in Canada, has gone to France to study the tuberculosis situation behind the trenches.

Dr. J. Orlando Orr, Toronto, Manager of the Canadian National Exhibition Association, was elected a Life Member at the Annual Meeting held February 28th.

Colonel J. McCombe, M.D., who was in France with Colonel Foster for some time, had a somewhat severe influenza early in March and was sent to London for treatment.

Mr. T. A. Dallyn, Sanitary Engineer, Provincial Board of Health, has returned from a two months' tour of Great Britain, during which he investigated the sanitation arrangements in Manchester, Liverpool, Belfast and other large cities.

Dr. Benjamin Hawke, who for some years practised in Toronto, went from San Francisco to New York and sailed on the Laconia, and was one of the survivors of the disaster.

Dr. A. S. Gorrell, of Regina, was elected Grand First Principal of the Grand Chapter of the Royal Arch Masons at the 59th Annual Convocation in Toronto, February 28th.

Col. G. L. F. Foster, M.D., for some time in the Army Medical Service in Toronto, was appointed Director of Medical Services in England with the rank of Surgeon-General.

Col. James Roberts, M.D., is now C. O. Cliveden. After Col. Roberts left Salonika in December Col. W. B. Hendry took his place as C. O. of the University Base Hospital.

Dr. A. E. Ross, M.P.P. for Kingston (Col.), has been made Director of Medical Services with the Canadian Forces in France. Reports from Overseas indicate that Col. Ross is in the best of health with full working capacity and great enthusiasm.

Colonel Lorne Drum, M.D., was appointed Assistant Medical Director of the Fifth Division, and Colonel J. W. Bridges, M.D., Assistant Medical Director at Bramshott.

Mr. C. H. Miller, an English stable proprietor, reports that the Hon. Dr. Beland has been for two years in a prison which is similar to Holloway Jail. He is in a small cell. Miller himself has been 65 days in the same prison and was there when the news came of Mrs. Beland's death.

Surgeon-General Jones, it was stated March 13th, will in the future be specially employed as a Medical Examiner. We understand General Jones has returned to Canada, arriving in Ottawa March 18th. It is expected that he will remain in the Dominion for some months looking into the Canadian end of the Army Medical Service.

Dr. Robt. J. Wilson, 20 Bloor Street west, Toronto, had a somewhat serious illness while working in the Ontario Hospital at Orpington. There was acute inflammation of the pharynx with some severe pain. He went up to London and, after spending about three weeks in hospital there, he was invalided home and reached Toronto March 6th. He gained strength rather rapidly after he came home, and expects to return to active service early in April.

A cablegram was received in Ottawa from England March 23rd, stating that Colonel John T. Fotheringham, C.M.G., will return to Canada, and will be placed in charge of the sick and wounded soldiers after their arrival in Canada, and that he will be the Surgeon-General. The Military Hospital Commission concur. As a result the sick and wounded returned soldiers will be cared for by the C.A.M.C.

Obituary

L. G. LANGSTAFF, M.D.

Dr. Garry Langstaff of Thornhill died suddenly March 17th, aged 57. He graduated M.D. from Victoria University in 1884. After graduating he practised for twenty years in Brooklyn, N.Y., and then returned to Canada and settled in Thornhill.

JAMES KIVELLE NEWCOMBE, M.D.

Dr. J. K. Newcombe died in England March 19th. He graduated M.D. from Victoria University in 1860. He settled in Toronto, where he soon acquired a very large practice, which he retained for many years.

MRS. GEIKIE

Mrs. Geikie, wife of Dr. Walter W. Geikie, of Elmira, Ont., died at her home, March 21st.

MRS. LANGRILL

Mrs. Langrill, wife of Dr. John Langrill, of Hamilton, died February 9th, aged seventy.

MRS. WAGNER

Mrs. Wagner, widow of the late Dr. W. J. Wagner, Toronto, and mother of Dr. Charles Wagner, died February 23rd.

Book Reviews

A Practice of Gynæcology. By Henry Jellett, M.D. (Dublin), F.R.C.P.I., Master Rotunda Hospital, Dublin. Formerly King's Professor of Midwifery and Gynæcology, Dublin. With 374 illustrations and 11 colored plates. Fourth edition. Philadelphia: Lea & Febiger.

This standard text-book is so well known that it is only necessary to call the attention of the profession to the fact that this is a new edition. The text has been entirely rewritten in some places and new chapters on Radiotherapy and Vaccine Treatment have been added. Everywhere there is the clearness and conciseness which make the writings of Dr. Jellett so easy to read. The illustrations are much better than in other editions.

A Manual of Nervous Diseases. By Irving J. Spear, M.D., Professor of Neurology at the University of Maryland, Baltimore. 12mo of 660 pages with 169 illustrations. Philadelphia and London: W. B. Saunders Company. 1916. Cloth, $2.75 net.

The point worthy of commendation in this book is that it is a concise manual, but that the work loses none of its clearness by its brevity. The illustrations are particularly good, because they really supplement the text. This is altogether an excellent little volume to use, either for the student or as a practitioner's reference.

A Manual of Therapeutic Exercise and Massage. Designed for the use of physicians, students and masseurs by C. Hermann Bucholz, M.D., Orthopædic Surgeon to Out-Patients, Director of the Medico-Mechanical-Hydrotherapeutic Departments of the Massachusetts General Hospital. Boston, Philadelphia and New York: Lea & Febiger; $3.25.

Massage has become such a necessary part of the practice of medicine that it behooves every physician to make himself acquainted with at least the rudiments of the art. Massage is

the basis of many of the forms of quackery at the present time, and medical men can greatly lessen the dangers of osteopathy, etc., if they will use mechanical therapeutics more often than they do. This little volume is intended to fill a long-felt want in the doctor's armamentarium.

Notes on the Causation of Cancer. By the Hon. Rollo Russell, with a preface by Dr. Dawtrey Drewitt. London and New York: Longmans, Green & Co.

The author attempts to draw conclusions from many sources, chiefly from the food and drink consumed by persons suffering from cancer. Although not always convincing, the arguments are interesting and may lead to conclusions which will stem the torrent of this dread disease.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia; assisted by Leighton F. Appleman, M.D. March 1st, 1917. Philadelphia and New York: Lea & Febiger.

The contents of this volume are: Surgery of the Head and Neck, by Charles H. Frazier; Surgery of the Thorax, Geo. P. Müller; Infectious Diseases, John Ruhräh; Diseases of Children, Floyd M. Crandall, and Rhinology, Laryngology and Otology, Geo. M. Coates.

The object of this quarterly is to give an epitome of the year's work, which, for twenty years, has been so well done as to make *Progressive Medicine* the best in the English language. This volume, with some new contributors, is fully equal to anything that has gone before.

Selected Articles

HOW TO INVESTIGATE THE CONDITION OF THE RECTUM, AND WHAT CAN BE FELT BY A DIGITAL EXAMINATION

By Sir Lambert Ormsby, M.D., F.R.C.S.
Senior Surgeon to the Meath Hospital and Co. Dublin Infirmary.

The index finger of the right hand should be used with well-cut nail, and a little soap, lard or vaseline inserted under the nail, to prevent fæcal or other matter getting under it. Then oil the finger well with vaseline or other aseptic lubricant, and press it against the anal opening for a moment or two. By gentle, onward, insinuating pressure, encourage it to pass through the external sphincter, and then the internal sphincter, the point of the finger slipping into the dilatation of the lower rectum above the anus. When fæces are not lodged in the lower portion of the rectum the mucous walls of the canal lie close together, and the introduction of the finger merely separates them. About an inch up the canal the internal sphincter muscle can be felt, and on pressure it feels to the tip of the finger like a light ring or band. On the anterior wall, about three inches up, a transverse fold of mucous membrane can be easily felt. This fold is constant, and forms the first impediment to the passage of a rectal bougie or enema tube. It corresponds to the upper border of the prostate gland, which can be felt quite plainly through the anterior wall of the rectum. It is here that the bladder may be tapped per rectum in case of retention of urine unrelieved by catheterism. The base or upper border of the prostate gland, which is about three-quarters of an inch broad, corresponds to the transverse fold of mucous membrane just mentioned, and an inch and a quarter nearer the anus is its apex. In front of this is the membraneous portion of the urethra, which is about three-quarters of an inch long, and just in front of this is the bulb of the corpus spongiosum, which can be felt by the finger with a little practice.

On further exploring the anterior wall of the rectum, the finger can fix and make out the apex, lateral lobes and base of the prostate. The rectovesical fold of the peritoneum is usually four inches from the anus, and can be reached as a rule by the finger.

After exploring well the anterior wall of the rectum, we must now turn the finger to its posterior wall, when the lower part of the front of the sacrum and the whole of the coccyx can be felt, and laterally the soft structures of the ischio rectal fossæ can be recognized. In the female, the vagina and uterus separate the urethra and bladder from the rectum, but the os, cervix, and posterior aspect of the body of the uterus can be felt through the anterior rectal wall.

By introducing the index finger of the right hand into the rectum, and passing it along the posterior wall, and applying the thumb of the same hand on the skin over the coccyx, any fracture, displacement, or growth connected with this bone can be easily detected. The finger must thus become educated to the natural feel and condition of parts in the healthy rectum, so that when it is introduced into a canal which has undergone any change or disease, the difference of feel, resistance, or touch can at once be detected, such as over-sensitiveness of the part, pain, contraction, dilatation, stricture, piles, ulceration, foreign body, polypus, elevations, excoriations, or depressions on the mucous membrane, impacted fæces, etc.

Sometimes it is necessary to get the whole hand into the rectum. This procedure must be carried out with the greatest care and gentleness. The hand must be very small, it must not measure more than nine inches in circumference at its largest part, it should be clenched tightly together, and the fingers rounded together in the form of a cone, oiled and warmed, and gently and slowly insinuated through the anal opening until it is passed through the sphincters without tearing the skin or rupturing the muscle or mucous structures. When once through the sphincters, the hand can be carried up as far as the sigmoid flexure of the colon; and valuable information regarding pelvic and abdominal tumors may be thus obtained, but this must be done very carefully and without force for fear of tearing the bowel or its peritoneal investments or attachments.—*Medical Press and Circular.*

THE TREATMENT OF BURNS BY PARAFFIN

By Lieut.-Colonel A. J. Hull, F.R.C.S., Royal Army Medical Corps.

Dr. Barthe de Sandfort introduced a treatment for burns by means of a preparation of paraffin which he called ambrine. The treatment consisted in washing the burns with sterile water, drying, and painting or spraying a layer of ambrine over the surface. The surface was then covered with a thin layer of wool, and a second coat of paraffin applied. The paraffin solidifies almost instantaneously, and a thicker layer of wool and a bandage are then applied. The paraffin preparation, ambrine, is a secret one, and the property of the Ambrine Company, Paris.

Observations of Dr. Barthe de Sandfort's treatment, and experiments with ambrine, carried out in a military hospital, gave one the impression that the treatment was valuable. Burns healed with rapidity; constitutional symptoms rapidly abated; pain was reduced to a minimum; scarring appeared to be obviated, or at any rate was not apparent. The need for grafting large burns appeared to be avoided. The burns healed so rapidly with healthy granulations that there appeared to be nothing to be gained by grafting. The patients were singularly free from sepsis. The conclusion arrived at from experimenting with the ambrine treatment was that mild burns healed with singular rapidity, and severe cases recovered which would have been unlikely to recover by the ordinary methods of treatment. Observers who had had large experience of burns treated by picric acid, ointments, and other methods in ordinary use, were unanimously of opinion that the paraffin method was superior to the older methods. The experience of those who had witnessed the results of burns after liquid fire attacks was that the ambrine treatment would save many lives, and accelerate the recovery of all burns.

A preparation resembling ambrine may be produced by impregnating hard paraffin with a small quantity of tar. The substance is not in very good solution, and falls to the bottom of the paraffin when the wax is heated. The excellent results obtained would therefore appear to be due to mechanical causes.

The protection of the burn from the air, the protection of the newly-formed granulations from damage, the splint-like effect of the wax in holding the damaged tissue immobile and at rest, appear to be the attributes which produce the effect. The heat of the applications and the conservations of heat to the surface may encourage the lymph flow, determine the supply of blood to the new capillaries, and favorably affect healing. The relief from pain and rapidity is due to the fact that the burn is held at rest in a plaster-like cast of paraffin, and a suitable nidus in which the epithelium will proliferate is provided.

The absence of scarring depends upon the fact that skin can be reproduced in two ways. First, by direct proliferation of the epithelium in the depth of the wound. This method of healing is only possible in wounds of the first and second degrees, which form the vast majority of all cases of burns coming under treatment. Secondly, by the extension of the epithelium from the edge of the wound in cases of burns of the third and deeper degrees. These burns are comparatively rare, and are the only cases suitable for grafting. The effect of the paraffin in the first class is to protect and stimulate the growth of epithelium, islets of which can be seen growing over the base of the burn. In the second class the epithelium spreading from the edge is protected and stimulated.

The first point to be determined was whether equally good results could not be obtained with commercial paraffin, section wax, or similar pure hard paraffin. The ambrine preparation has peculiar and valuable mechanical properties. It has a lower melting point than ordinary section wax, is much more plastic when cooling and has not the tendency to crack which ordinary hard paraffin has. It also adheres well to the skin and is not liable to slip after a dressing is applied.

Hard paraffin is not a suitable application in its raw state; it lacks the mechanical properties of ambrine; there is an absence of the flexibility and adhesiveness which ambrine possesses. I found that if hard paraffin of suitable melting point be subjected to a temperature of 130 degrees C. by means of superheated steam, the melting point was reduced about 2 degrees C., and the hard paraffin now possessed the mechanical properties of ambrine. The therapeutic value of ambrine appears to be entirely mechanical, and I suggest that the processes of impregnation with tar or other substances are associated with the application of superheated steam, and that it is this super-

heated steam that is the essential process in its manufacture. The clinical results of the application of hard paraffin—treated with superheated steam—to burns appear to me to be indistinguishable from those of ambrine.

Better results are obtained by the addition of certain antiseptic and stimulating substances. The wounds become clean more rapidly, pain is decreased, and the offensive smell associated with the ambrine dressings is avoided, and the burns heal more quickly. It was found necessary to change the treatment of sluggishly-healing burns treated by ambrine to a paraffin containing an antiseptic. The change was always beneficial. The argument that an antiseptic will destroy the saprophytic action of bacteria and will retard the treatment has not been borne out by clinical experience.

It is unnecessary to describe in detail the various experimental preparations. Laboratory experiments were made with a view to impregnating paraffin with various antiseptic substances—resin, essential oils, and tars. Experiments were made in order to produce a paraffin possessing the requisite melting point, plasticity, and adhesiveness. Cases were treated in the burn wards with various experimental preparations. Tar preparations were at first used; paraffin impregnated with oil of eucalyptus proved more efficacious. In order to obtain a painless treatment experiments were made with paraffin preparations containing analgesic substances. Potassium sulphate was used in one successful preparation (No. 4 paraffin), but was discarded as unnecessary in later preparations. After progressively improved results, a paraffin was finally arrived at having the mechanical properties of ambrine and containing a small amount of antiseptic. This is now in routine use known as No. 7 paraffin.

The results obtained by the use of No. 7 paraffin have surpassed the results obtained by ambrine or any other tried preparation. Severe burns of the third degree, accompanied by sloughing, and in a very septic condition, have cleaned and taken on healthy repair under this treatment, after a trial of the ambrine treatment. Severe burns of both palmar and dorsal surfaces of the hands, extending to the tendon sheaths, have healed in three weeks without contracting cicatrices. Extensive burns of the flexor surfaces of the limbs, the regions most likely to be altered by contracting cicatrices, have healed without apparent scarring. Burns of the face heal with a new healthy skin without scarring.

Severe burns due to cordite, petrol, and liquid fire have been healed with this preparation; there have been no untoward results.

Patients who have been admitted with septic burns of extensive areas have rapidly recovered from constitutional symptoms, the temperature usually becoming normal in a few days.

The treatment is practically painless, and patients rarely complain of pain after the first application. It has never been found in the least necessary to give an anæsthetic for the first or subsequent dressings. The rapidity of healing, the absence of sepsis or pain, the healthy new skin resulting, without contractile cicatrices or deformity, have been really remarkable. Burns become clean more rapidly than under ambrine treatment. Sloughs of deep tissues, in some cases down to bone, readily separate, and the burns become clean.

Method of Treatment.

The paraffin treatment is begun at the first dressing; very exceptionally, in very septic burns, the paraffin is replaced by hot boric fomentations for two days after two days of paraffin treatment.

The burn is washed with sterile water and dried. The drying is accomplished by placing a dry piece of gauze over the burn. An electric drying apparatus, such as is used by a hairdresser for drying hair, if available, is a convenient method of drying the burn.

The burn is next covered with a layer of paraffin at a temperature of 50 degrees C. The No. 7 paraffin has a melting point of 48 degrees C. The temperature may be estimated by waiting until the wax shows a solidifying film upon the surface. A broad camel-hair brush, sterilized in wax, has been found to be a rapid and painless method of applying the paraffin. A spray may be used, but sprays readily get out of order, are troublesome to use, and the dressing takes longer. In theory a spray should be used in order to prevent any damage to the epithelium. In practice we have found a brush, skilfully used, sufficiently satisfactory. Sprays are indicated in very painful cases. A metal spray of rather large bore should be employed. The spray must be immersed in hot water during use.

A thin layer of cotton-wool, cut the same size as the area of the burn is placed over the wound after the first layer of paraffin has been applied. This layer of wool is covered with a

second layer of paraffin. The wool is cut in thin sheets and pressed between layers of paper in order to obtain thin layers of wool. The dressing is completed by applying wool and bandage. The burns are usually dressed daily. In the later stages, when the burn is clean and only a small amount of pus is formed, the dressing is changed every forty-eight hours.

Blisters are not interfered with in any way at the first dressing, the paraffin is applied after washing the burn. At the second dressing the dead layers of skin are cut away. Sloughs usually separate after a few dressings. The separation of sloughs is accelerated by applying a layer of jaconet over the wool and paraffin beneath the wool and bandage dressing.

FORMULA FOR NO. 7 PARAFFIN.

Resorcin	1	per cent.
Eucalyptus oil	2	"
Olive oil	5	"
Paraffin molle	25	"
Paraffin durum	67	"

Melt paraffin durum, and add paraffin molle and olive oil. Dissolve the resorcin in absolute alcohol (soluble 2 in 1), add the alcoholic resorcin, and lastly add the eucalyptus oil when the wax has cooled to about 55 degrees C.

A smaller amount of resorcin may be used. The whole of the resorcin does not remain in suspension, and we have used a paraffin containing 0.25 per cent. resorcin with good results.

Difficulty having been experienced in obtaining resorcin in large quantity, beta naphthol, which has the additional advantage of being a cheaper antiseptic, has been substituted for resorcin in more recent preparations, as follows:

Beta naphthol	0.25	per cent.
Eucalyptus	2.0	"
Olive oil	5.0	"
Paraffin molle	25.0	"
Paraffin durum	67.75	"

We have employed No. 7 paraffin in certain stages of the treatment of trench feet. The mode of application of paraffin to the ulceration following frost-bite is in every respect similar to the application of paraffin in the treatment of burns, and the results have been equally satisfactory.—*B. M. J.*

Selections

The Action of Veratrone in the Treatment of Eclampsia

In the *Edinburgh Medical Journal* for December, 1916, Haultain concludes from its use that it may be stated that we have in veratrone a drug of the utmost value in the treatment of eclampsia, as shown by its success in the treatment of 38 consecutive cases. After the initial dose of 1 cc. subsequent doses should be regulated by the blood-pressure of the patient, as by so doing it can be given with safety and to the greatest advantage.—*Therapeutic Gazette.*

A Study of the Menopause

Culbertson (*Surgery, Gynæcology and Obstetrics,* December, 1916), concludes his article as follows: The menopause is a functional derangement on the part of the various glands of the endocrine system subsequent to the cessation of the ovarian secretion.

On this basis may be explained the psychic and somatic manifestations of the menopause.

The vasomotor disturbances represent an instability of arterial tension.

In the majority of cases this takes the form of a vacillating hypertension, both systolic and diastolic.

The diastolic pressure is not elevated proportionately to the systolic. This produces an increased pulse-pressure.

Hot flushes, sweating, and other vasomotor symptoms are directly created by the vacillations in arterial tension.

In a minority of cases there is arterial hypotension, and here also the systolic and diastolic pressures are out of proportion.

Hypertension is apparently due to a relative oversufficiency on the part of the hypophysis or the adrenals.

The psychic symptoms are apparently influenced by thyroid dysfunction—in the majority of cases a hyperthyroidism, in the minority a hypothyroidism.

The administration of the missing hormone, represented by the extract of corpora lutea from animals in early gestation,

brings about a gradual restoration to normal of the blood-pressure with disappearance of the mental symptoms.

This reduction of blood-pressure by organotherapy, together with the disproportionate systolic and diastolic rise, is offered as evidence that the hypertension is a functional one and not due to organic changes.

Blood-pressure estimation is essential, as a means both of measuring the degree of menopause disturbance and of controlling its therapy.

An occasional pressure reading is of little or no value. Tension must be determined at frequent intervals, preferably daily until improvement is well under way.

The significance of functional hypertension as a factor in uterine hæmorrhage is obvious and will be made the subject of a subsequent report.—*Therapeutic Gazette.*

Salvarsan in the Treatment of the Double Infections, Tuberculosis and Syphilis

In the *American Journal of the Medical Sciences* for December, 1916, Potter reaches these conclusions:—

1. The prompt employment of salvarsan or neosalvarsan is indicated in latent, chronic, and moderately active tuberculosis: (*a*) as soon as the nature of an added infection is diagnosed with reasonable probability to be syphilis; (*b*) whenever the history, signs or symptoms strongly suggest a previous luetic infection, particularly if such a patient is not improving upon the usually successful hygienic and climatic treatment for tuberculosis; but (*c*) active tuberculosis, acute tuberculosis, and diffuse miliary tuberculosis are usually contraindications to the use of these new arsenic preparations, although in both the first two mentioned groups there will be found many luetic patients upon whom a small dose of salvarsan may well be tried and, unless followed by untoward effects, cautiously repeated in gradually increasing doses.

2. When tuberculosis infects or becomes active in a patient with a secondary, tertiary, or even latent syphilis, the careful employment of one of these drugs is also indicated.

3. The more active the tuberculosis, the smaller should be the initial dose; the slower its increase, the less frequent the interval, and the greater care and watchfulness required.

4. Tuberculin-like focal reactions may follow their administration, should be carefully watched for, and, if present, the location, intensity and character will frequently guide in the selection of the next appropriate dose or interval.—*Therapeutic Gazette.*

The Pneumococcus

Since Sternberg and Pasteur discovered the pneumococcus and Frankel and Weischelbaum established its definite relation to pneumonia, great advances have been made in our knowledge of this organism. Chief of these has been the discovery by Dr. Rufus Cole and his associates of the Rockefeller Institute for Medical Research, that pneumococci comprise many distinct and different types. So distinct in fact are these that Cole regards the different forms of pneumonia due to different types of pneumococci as much distinct from each other as are typhoid fever and para-typhoid fever.

Distinction in the type of the pneumococcus does not rest upon its cultural differences but upon the different immunizing properties possessed by each. These peculiar reactions of bacteria to the serum of animals immunized against them are very specific. It has been found by Cole and his associates that using these reactions as criteria, pneumococci found in cases of pneumonia may be divided into at least four groups. All the organisms of Group I are alike so far as their immune reactions are concerned. The same is true of the organisms of Group II. In Group III the organisms also show peculiar immunity reactions, and in addition they differ from those of the preceding groups in that they have larger capsules and form a sticky exudate in animals. In the fourth group are placed the remaining pneumococci. These have been found to show no common immunity reactions and in general they are much less virulent for animals than are those of the preceding groups.

It has been estimated that Types I, II and III of pneumococci are responsible for approximately 75 per cent. of all cases of lobar pneumonia occurring in the United States. Type I is accountable for approximately two thousand out of the six thousand annual deaths from lobar pneumonia in New York City. That is, as William H. Park has pointed out, about 30 per cent. of the cases of pneumonia and about one-third of the total deaths are caused by infection of Type I. These figures

are very important because at present the results of serum injections following their antibody content seem favorable in Type I infections, doubtful in Type II, and absolutely negative in Type III and in Type IV.

Repeated intravenous injections of Type I into horses result in the production of abundant immune bodies. The use of such immunized horse serum in individuals ill with Type I infection has been followed with excellent clinical results in the hands of Cole and his associates at the Rockefeller Institute. About 80 cubic centimetre of the serum is diluted with an equal quantity of salt solution and given intravenously. This is repeated about every twelve hours until a permanent improvement is noted. The average case receives as a rule from three to five such doses. The difficulty in the way of the general adoption of this method has been that so far the recognition of the type of pneumococcus has required experienced laboratory workers. However, there is every reason to hope that the method will soon be generally employed, as the identification of the type is not by any means difficult. It is determined by injecting the fresh sputum into the peritoneal cavity of a mouse. After six to twelve hours the cavity is washed out and the agglutinating characteristics of the pneumococci tested. In the hands of experienced workers the test can usually be completed in eight to fourteen hours.

It has been for a great many years commonly assumed that infection in pneumonia was autogenic and occurred from invasion of the lungs by pneumococci habitually carried in the mouth. If this were so, the same types would be found in normal mouths as occur during the disease. Examination of a series of normal individuals by A. R. Dochez has shown this not to be the case. The two types of pneumococcus responsible for the majority of the severe cases of lobar pneumonia were not found in the normal healthy mouth, except in instances where the patient harboring the organism had been in intimate association with lobar pneumonia. When such a condition existed the organism found in the normal mouth invariably corresponded in type to that found in the lung of the patient. These studies make it probable that the majority of the cases of pneumonia depend either on direct or indirect contact with a previous case.

Based upon the work by Dochez, Edward B. Vedder has drawn attention to the fact that every case of pneumonia is due to and might be traced directly or indirectly to a previous case

of pneumonia. On this account from a sanitary point of view, pneumonia should be treated just like any other infectious disease in which the infecting agent is transmitted by the mouth secretions of those affected. Vedder rightly suggests that the following measures might well be adopted by Boards of Health: 1. Notification of all cases of pneumonia. 2. Prompt visitation by a health officer, collection of specimens, and laboratory diagnosis of the type of organism present; *a*, in the patient; *b*, in the contacts. 3. Isolation of the patient and of any contacts who harbored the type of pneumococcus found in the patient. 4. A negative culture requirement before the patient or carriers were permitted to mingle with the community. These measures may appear at first glance to be stringent, but undoubtedly through their enforcement the widespread prevalence of pneumonia with its appalling mortality can be greatly lessened.—*The Saint Paul Medical Journal.*

"Ether" Pneumonia

The widespread belief that ether administration is a potential precursor of a post-operative or "ether" pneumonia still exists, although opposed to a multitude of solid facts which have evidently never been sufficiently emphasized. Not a few of the surgeons who look askance upon the administration of ether to patients with respiratory troubles are in the habit of performing themselves many actions which really presuppose a belief in the harmlessness of ether as regards the respiratory passages. The intratracheal insufflation of ether, lauded as it is by many who do not administer it, is certainly remarkable for the absence of after complications; and, indeed, the huge proportions of uneventful recoveries after the ordinary ether anæsthesia compared to the insignificant number of consequent pneumonias should in itself be sufficient to exclude ether itself from the list of respiratory irritants. Those who have persevered in their endeavor to attain to an absolute "pneumonialess" record in their surgery were astonished that a change to chloroform, so far from yielding anything like a happy result, merely increased the amount of after-trouble, while the performance of operations under the most painstaking local anæsthesia again resulted in a disappointing failure to eradicate the pulmonary complications. The only conclusion which was possible under

the circumstances—a conclusion strengthened by the minute account of the lung lymph field, which Cunningham had supplied in such detail—is that, in the first instance, the inhalation of infected material from the mouth has perhaps everything to say to some forms of the pneumonia, but that the spread of infection from the abdomen to the lungs through the diaphragmatic lymphatics has also not a little influence. The unwillingness to expand the lungs for fear of the abdominal pain caused thereby again leads to defective aeration, and consequent predisposition to trouble.—*The Medical Press and Circular.*

Deaths from Cancer

The fifth annual report of the Society for the Prevention and Relief of Cancer states that at the present time in England and Wales alone some 40,000 persons die annually from this scourge. The report also says that for the first time the mortality from cancer has definitely overtaken that from consumption. It is further pointed out that—

Whatever the underlying cause of the malady may be, the lamentable fact remains that as a result of the present unparalleled warfare, we shall have to face in the very near future a most serious increase in malignant growths in men, and especially the men who have served their country in the field.

A hospital fund has been started and an appeal is being issued pointing out the urgent necessity for research.—*The Medical Press and Circular.*

The Diet of the Brain-Worker

The amount of fuel required in the economy of the man whose employment entails bodily exercises in greater or less degree has been fully discussed during the last few months, but the brain-worker still remains in doubt as to the minimum intake of food which he requires. The text-books have so far contented themselves with pointing out that brain-work, of whatever grade of intensity, is associated with a scarcely measurable increase in metabolism. Professor W. M. Bayliss, in a course of lectures delivered last autumn at University College, London, and now forming the basis of a useful little manual, comes to the rescue of the brain-worker and suggests that there is another

consideration besides the actual quantity of energy developed by mental activity which should be taken into account. The oxygen consumed by any organ is an index of the food required by that organ. Experimental results prove that, although the actual consumption of oxygen in the nerve centres is not great, it has to be supplied at a high pressure. This is shown by the fact that even momentary stoppage of the food supply causes immediate unconsciousness, although the oxygen of the blood still remaining in the brain cannot have been exhausted. Professor Bayliss suggests the analogy of an electro-magnet wound with thin wire which does not need much current to actuate it, but which, owing to the high resistance of the wire, requires a high voltage to drive the current through. It is, at any rate, possible that efficient mental work may require food to be presented at high pressure, and that a brain-worker should take a diet of energy value equivalent to that of moderate muscular work. The question deserves further consideration.—*The Lancet.*

Alcohol and the Unborn Child

Now that prohibition is gradually increasing the number of its adherents the conflict between the defenders of alcohol and its opponents is growing more bitter, and naturally both turn to medical testimony for support. Both, it may be added, get it, although since the experiments of Kraepelin there has been a decided tendency to give Demon Rum the worst of it. Especially has controversy raged about the effect which alcoholism in the parents may have upon the offspring. One of the chief contributors to our knowledge of this subject, Dr. J. W. Ballantyne, recently read a paper before the English Society for the Study of Inebriety, giving his own findings—they practically represent his whole life work—and quoting the experiments of Stockard and Papanicolaou upon alcoholized guinea pigs. These experiments show that alcoholism in the parent does exert a baleful influence upon the germ cells, individually and collectively as the embryo and the fetus. Ballantyne does not mince words when he says: "Alcohol is a danger to antenatal health and a menace to antenatal life at every one of the stages of that existence and through each of the progenitors." This certainly does not place the responsibility anywhere but where it belongs, on the shoulders of the parents. It is also interesting in view

of the recent attempt to show that epilepsy, for example, is sometimes the result of impregnation at the time when both parents were alcoholized.—*Medical Record.*

Specificity in Antiseptics

That the power of an antiseptic to kill organisms is not the same for all organisms has been recognized in bacteriological practice for a long time, and Dr. Kenneth Taylor's special study in regard to the antiseptic treatment of chronic infected wounds, exhibiting, as they do, several types of bacteria, deserves careful reading. He records a large number of bacteriological examinations of wounds under treatment with different solutions, and instances are brought forward of the specific action of certain dressing solutions. The belief is expressed that further analytical study of antiseptics will result in the discovery of dressing specific for one or more groups of bacteria. By a successive application of these dressings the organisms present in a wound, he holds, may be reduced in number or eliminated, one variety at a time, and true sterilization of a suppurating wound accomplished. The concept of the "general antiseptic," he concludes, must go by the board and the search for a cure-all be recognized as unprofitable. One interesting case is that of the gas bacillus, on which no effect seems to have been produced by any of the dressing solutions with the exception of quinine, where the early disappearance of the organism was strikingly apparent, a result which is consistent with earlier experience of the behavior of this alkaloid both *in vitro* and in clinical application. Quinine, however, showed very little action upon the staphylococcus and still less upon the *B. pyocyaneus.* Further examples of equal interest of the specificity of antiseptics are given with other germicidal preparations. Thus, carbolic and cresol proved more active against the streptococcus than against the staphylococcus, and showed very little activity against the gas bacillus. Thymol showed a fair degree of activity against the streptococcus, but was less active against the staphylococcus and still less so against the gas bacillus, while it showed practically no action upon pyocyaneus. Dakin's solution, which has been regarded as a general antiseptic, showed a moderate activity against the staphylococcus, but was nearly inert against the *B. pycoyaneus* and the gas bacillus, although more active against the streptococcus. The results are certainly full of interest and import-

ance and seem plainly to point out the great variation in the activity of some of the "general antiseptics" toward the common bacteria of infected wounds, so that the conclusion that bactericidal values are relatively specific and not general seems abundantly justified. Touching somewhat upon the same subject, a paper on "A Comparison of Some Antiseptics in Respect to their Diffusibility, Action of Leucocytes, and Action on Ferment Activity," by Hugh E. Magee, B.Sc., appears in the February number of the *Edinburgh Medical Journal*, in which the author expresses his acknowledgment to Dr. Kenneth Taylor for his help in the prosecution of this research. In order to demonstrate wherein antiseptic solutions differ from each other, a comparative study was made of some of the common bactericidal agents in regard to diffusibility, chemiotactic action, and action on ferment activity. These properties are shared in different degrees by various germicidal solutions as is clearly shown in the paper, and the results are instructive in connection with the treatment of wound infection. A number of antiseptics were chosen for the investigation and their values in the directions indications deduced. The specificity of the antiseptic tested bears a relationship to the properties investigated. —*The Lancet.*

Surgery at the Fore

Charbonnel has spent twenty-five months in the ambulance service and can tell little about ultimate results; in fact, he never could follow up a case for more than twenty or twenty-five days. Nor are there any records of work done for posterity to read. To save life takes precedence, and the wounded man who cannot be moved must receive attention. A difficult point to determine is the optimum of distance to carry the transportable wounded. Some regard forty miles as the best average distance; others ten miles. The adherents of the longer distance says "transport once for all" and without regard to the kind of injury. The others hold that the main object is to get the severely wounded to the nearest point at which wound disinfection can be practised. This once done further transport can be effected by rail or equivalent. In a war of position the first plan has the advantage, while in an offensive campaign the second is the choice. In regard to infected wounds the author states that the sight of pus is often welcome in as far as it

connotes the absence of gas gangrene. The only asepsis possible in warfare is complete immediate extirpation of the wound area. Should we suture afterward? As a general rule, no. Antiseptics are of course applied—hydrogen peroxide, ether, the Dakin-Carrel solution, etc. Irrigation with the last named appears to be the choice of precedure whether or not the wound area is first excised. Two preventive injections of antitetanus serum are invariably made, and the author has yet to see a case of tetanus in his service. Naturally foreign bodies are at once removed with the aid of the X-ray. Next to infection, including gas infection, hæmorrhage kills the most wounded. Much debate has occurred as to the policy of temporary compression during transportation, but there appears to be nothing else to do. On arrival at the destination wounded arteries must be ligated above and below, as arteriorrhaphy is quite impossible. Hæmatoma must be subjected to immediate operation. In some cases the central ligature may need to be placed at considerable distance above the wound, and to apply it it may be necessary to make a wide incision down to the artery, as when the pectoralis major is divided for the purpose of tying the subclavian in wounds of the axillary artery. In the condition known as thick calf, which follows a so-called seton wound of one of the large arteries, and is due to a hæmatoma, all the tissues in the leg and foot suffer from compression, and there result ischemia, a woodlike hardness and pain. Varicose veins may aggravate this condition, and the large vessels may undergo thrombosis. The treatment consists in deep incision, evacuation of blood clots and ligation of the wounded arteries. It is often impossible to tie successfully the varicose veins. Next to hæmorrhages osteoarticular injuries are the most common cause of death. Fracture of the diaphysis of the femur is far more serious than any other injury of its class. The treatment consists in free exposure; removal of crushed tissue, osseous fragments, and foreign bodies in general; irrigation with Dakin solution. As soon as possible one must immobilize with plaster Paris, with or without fenestration, in the interest of preventing pain, secondary hæmorrhage, and sepsis. In fractures of the humerus the let alone plan often answers well, and if intervention is necessary one should "save the pieces" of bone for they often heal in. For immobilizing the humerus several special apparatus are in use (Hennequin, Delbet, Aynard). There are several indications for amputation in severe projectile fractures, depending on severity of local injury,

injury to blood vessels, and grave secondary infection. The article will be continued.—*Journal de Médecine de Bordeaux*, in *Medical Record*.

The Significance of Cough of Sudden Onset

It is an accepted and deplorable fact that physicians are leaning more and more on the crutch of laboratory findings and losing or, which amounts to the same thing, not using their clinical sense. With the disinclination to use and to sharpen their powers of observation comes the neglect of careful histories. Without any spirit of harsh criticism we would mention this matter in order to point out that there are in every physician's experience instances where a careful history taken when the patient first came under observation might have avoided a fatal termination.

In this connection attention is called to the onset of cough, especially a sudden onset in an individual previously well. Within the past six months there have come under our observation and notice several cases of foreign bodies in the air passages and in the œsophagus in which the parents—because these patients are almost invariably children, and children often too young to be questioned—gave no more information than that the child was ill with a cough. The diagnoses were made in each of these cases by a careful and painstaking history.

In every child the sudden onset of cough is a symptom of deepest significance. In some instances the parent will know the moment that the first paroxysm began. Usually, in foreign body cases, there is a sudden paroxysm, often with dyspnea and cyanosis, which after a few moments passes off. This may be followed at shorter or longer intervals by other paroxysms or there may be further cough of slight or marked severity but not paroxysmal. The cough is often relieved by the patient's lying down, perhaps in one certain position. Any movement or change in position may bring on a return of the coughing. There is no fever or expectoration, at least at first, and there may be no physical signs of lung involvement. The parent may volunteer the information that the child was eating at the time of the first paroxysm. A history such as this can often be elicited by a little questioning and then the diagnosis is plain. Roentgenography is of very little value, for unfortunately very many of the foreign bodies inhaled in this way do not

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cast shadows. A shadow, however, clinches the diagnosis and a roentgen examination should always be made, for it will serve to definitely locate a certain number of foreign bodies. A negative picture makes an early bronchoscopic examination all the more imperative, for food particles disintegrate in the bronchus and then are extremely difficult to remove in their entirety.

The consequences of retained foreign bodies of soft consistency are very serious. Pneumonia follows, as a rule, and chronic fibrous processes may be set up, or the breaking down of lung tissue and abscess, formation, or dilation of the bronchi and bronchiectatic cavitation may ensue.

A history of this sort is pathognomonic. Yet in a recent case three different medical men ignored these facts as of no consequence and so impressed the parents that a fourth doctor who was called because the child was growing worse was not told this history. He was unable to make a diagnosis on the physical findings and asked for a consultation. The pediatrist, an experienced and able man, by careful questioning again elicited the history of cough of sudden onset and bronchoscopy removed the foreign body, a piece of nut, after an interval of three weeks. The child died of bronchopneumonia.

Another recent instance was that of a metallic foreign body —a collar button—which perforated the œsophagus after having been lodged therein for over four weeks. This child had been taken to the pediatric clinic of one of our hospitals. Despite careful questioning, the mother denied the possibility of a foreign body's presence. Four weeks later there was a massive hæmorrhage from the mouth and the fluoroscope revealed the collar button. The child was in extremis when admitted to the hospital and died with the button unremoved.

Valuable time is lost and comparatively simple conditions with practically no mortality turned into indubitably fatal ones by neglect of these niceties of observation. When patients with unaccountable cough—with or without dyspnea and expectoration and with few or unexplainable physical signs are submitted to early bronchoscopy—which in expert hands is harmless—deaths from foreign bodies in the air passages will be reduced to a minimum.—*American Journal of Surgery.*

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Miscellaneous

The Delicate School Girl

Even the most robust and generally healthy children show the deleterious results of the modern system of educational "forcing" that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anæmic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated school rooms. How much more likely is such a result in the case of the delicate, high-strung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty of sleep, out-of-door exercise without fatigue, open windows at night and plenty of nutritious food, should all be supplied. Just as soon as an anæmic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude) for a week or two, or as long as necessary to bring about an improvement in the blood state, and a restoration of color to the skin and visible mucous membranes. This efficient hæmatinic is especially serviceable in such cases, because it does not in the least interfere with the digestion nor induce a constipated habit.

Thyroid Disease and Septic Tonsils

Thyroid disturbances, including typical Basedow's disease, are associated with septic tonsils so often and show in some cases such marked improvement in all the symptomatic conditions after tonsillectomy and adenectomy that the relation of cause and effect is proved as more than a suspicion. And persistent thymus with status lymphaticus has been demonstrated in so many instances as associated with the need of tonsillectomy that coincidence does not satisfactorily explain it.—*Wm. S. Tomlin in the Indianapolis Medical Journal.*

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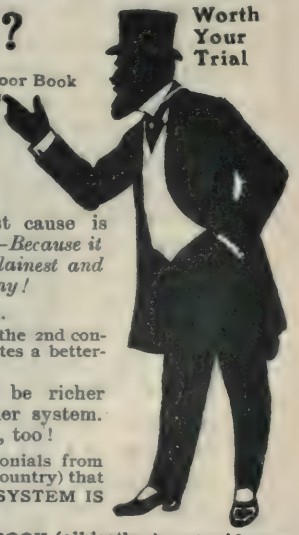

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Ipecac

Ipecac is the root of a Brazilian herb. It is said to have been in common use in its native country long before it was brought to Europe by Piso at about 1650. Shortly afterward a charlatan by the name of Adriaan Helvetius placarded Paris with the announcement that he had a cure for dysentery. Hearing of this, Louis XIV summoned him to treat the dauphin, who was suffering from this disease. The patient recovered, and the formula, which Helvetius is said to have obtained from a physician in the Netherlands, was purchased by the government for 1,000 louis and made public. Ipecac was one of the ingredients of the formula, and from that day to our time ipecac has been used as a remedy in dysentery, but with varying fortune, it being vaunted by some as a specific and condemned by others as useless. Under any circumstances the vomiting was a heavy drawback.—*J. A. M. A.*

The Treatment of Paresis

Evans and Thorne (*Am. Jour. Insanity, Amer. Jour. of the Med. Sciences*) have treated 15 patients suffering from paresis with salvarsan and neo-salvarsan; 14 of these patients were treated by the intraspinous method of Swift and Ellis and one by the intraspinous and intracranial methods combined. With the latter method two intracranial treatments were given at four weeks' interval, together with three intraspinous injections. The largest number of intraspinous injections given to one individual was ten and the smallest number three. Three of these patients showed distinct mental and physical improvement; 5 showed physical improvement only; 2 died during the course of treatment; 2 died ten and thirteen months, respectively, after treatments were discontinued; the remainder showed no improvement whatever. Of the three who showed mental and physical improvement 1 was discharged and still remains in good physical and mental condition, having returned to work. One showed the first signs of improvement three months after receiving the last treatment. The third died with convulsions ten months after treatment. The number of treatments given to each patient was insufficient to reduce the intensity of the Wassermann reaction, either in the blood or the spinal fluid. The improvement observed following the treatment may be seen in the same number of paretics who have received no special treat-

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ment. The authors believe that the amount of salvarsan which can be introduced safely into the central nervous system is too small, and the intervals are too long between the treatments, to be of great value in moderately advanced cases. The intracranial method seems to be unnecessary according to the authors. They believe that the same result can be obtained by the intraspinous method.—*The Medical Fortnightly.*.

Sterility

The following are the conclusions of a paper by V. D. Lespinasse, Chicago, (*Journal A. M. A.*, Feb. 3, 1917), written with special reference to a weak or impaired spermatozoa and the general diagnosis and treatment of the condition: "Many cases of sterility attributed to the woman are due to weak spermatozoa. This type of case can be diagnosed by careful examination of the semen, as has been described in the foregoing. The cause of sterility is as often in the male as in the female, if not oftener. Treatment depends entirely on the cause. Obstructive cases, male or female, are operative. Weak sperm cases would indicate direct uterine insemination and glandular therapy, diet, modes of life, etc. Secretion cases necessitate appropriate therapy to check or modify the destructive secretions. Non-production of the essential elements, namely, spermatozoa or ova, would indicate glandular therapy."

Syphilitic Lesions

A. L. Fisher, San Francisco (*Journal A. M. A.*, Feb. 3. 1917), calls attention to the fact that there is a considerable number of syphilitic cases simulating tuberculosis and other bone and joint lesions that escape recognition, and, second, that there is a considerable number of cases of bone and joint syphilis that give negative Wassermann reactions. He has seen at least eighteen cases of these, some of them unmistakable syphilis, within the last year or two. Of the second group, the larger one numerically, the lesions were in and about the joints rather than in the shafts of the bone. Many of the patients had been in institutions or hospitals where their disease had been regarded as tuberculous and treated accordingly. Five cases selected at random are reported in the paper. He asks why we get so many negative Wassermann reactions in

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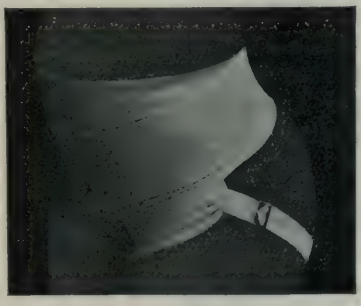

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bone syphilis. The percentage cannot be given exactly, but it seems at least 10 per cent. Another point that these cases emphasize is that fixation of syphilitic joints neither gives relief nor aids in the cure. Still another point is the large per cent. of children in these cases, eight out of eighteen or really eight out of fourteen under 10 years of age, quite a contrast to the ordinary teaching that syphilitic joints are not common in childhood. Another question that comes up is, What are we to consider as the most reliable test of syphilis? In his opinion it is unquestionably the therapeutic test, and he believes that this should never or almost never be omitted in trying to arrive at a conclusion regarding the nature of a chronic joint infection.

Menorrhagia Treated by Radium

Mrs. W., aged forty-eight, has had a menorrhagia of three years' standing, no sign of menopause. The uterus was about the size of a two and one-half months' pregnancy, and the condition was diagnosticated as a diffuse symmetrical fibrosis. The patient was anæmic, nervous, exhausted, an invalid from long-continued bleeding. It was not a favorable case for operation. March 25, 1916, 800 milligram-hours of radium was applied within the uterine cavity. At this date, November 3, 1916, Dr. Polak reports that the uterus has diminished over 50 per cent. in size and that the patient is in good health.

Dr. Polak—Dr. Chase's case presents some interesting points. The doctor gave her 50 milligrams of radium for sixteen hours; the radium capsule was placed inside the uterus after the cervix was dilated under morphine; the cervix and vagina were then packed. There was a bloody discharge for two or three weeks characteristic of a burn necrosis. When the doctor first treated the patient, she had a hæmoglobin percentage of between 30 and 40 and was a poor operative risk. I saw her day before yesterday, when her hæmoglobin was 80, and she had not flowed any since last March. She has the usual senile uterus, hard, and with the typical atrophy found in women of her age, and which has been described so impressively in the work of Jeff. Miller, of New Orleans. The uterus is movable, of the general fibrotic type, where there has been a substitution of yellow elastic tissue for the muscle fibres.—*Trans. Brooklyn Gynæcological Soc.*, Nov. 3, 1916.

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Prostatectomy

The occasional surgeon, or the surgeon unacquainted with the science of urology other than as it crosses his path in the operating room, does not need to discuss the disputed questions concerning obstruction at the neck of the bladder due to prostatic hypertrophy or distortion. To this sort of man a complete examination of the patient is not necessary. All that he needs to know is that there is an obstruction at the neck of the bladder, that it is probably due to an enlarged prostate, and that it can be removed surgically.

If he is lucky his patient will survive his operation, with the chances of more or less permanent disability. This is sufficient for some men. To others of us who have passed through the developmental stage of prostatic surgery, who can look back upon an uncontrolled hæmorrhage, the unexplained death of some patients whose good general appearance lured us into a state of false security, we feel that we need a great deal more information in order that we may know beforehand what to expect in a given case and to choose, if may be, the safest course to pursue under the circumstances.—*Paul Pilcher in the Boston Medical and Surgical Journal.*

The After Care of Children's Ills

With the advent of school-days, and the daily association of many children in the class-room, the contagious diseases of childhood develop and multiply. The exanthemata, as well as diphtheria, whooping cough, etc., comprise a considerable proportion of the diseases that the family physician is called upon to treat during the late fall and winter months. The robust child, with but a mild infection, frequently recovers quickly and, perhaps, requires but little attention during the convalescent period, while the child whose general nutrition is "below par" usually emerges from the acute attack with a condition of anæmia and general vital depreciation. In a large majority of cases, it is undoubtedly wise to encourage and hasten convalescence by means of a palatable and efficient hæmatinic and general tonic. For this purpose Pepto-Mangan (Gude) is especially valuable. All children like it and take it readily; it does not irritate the digestive organs, but, to the contrary, increases the appetite and assists in the absorption and assimilation of the

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A small boy carrying a basket entered a third-class carriage the other morning. He found the compartment full, and stood as if uncertain what to do. A gentleman who was seated with his bag beside him, put the bag on the floor and the boy's basket on the rack above his head, and offered the lad a seat. Presently the gentleman felt something trickling down on his head from the basket above.

"My boy," said he, "your pickles are leaking."

"Them ain't pickles," replied the boy. "Them's puppies."
—*The Prescriber.*

Pain

World's use is cold, world's love is vain,
World's cruelty is bitter bane
But pain is not the fruit of pain.
—*E. B. Browning, A Vision of Poets.*

Rich the treasure,
Sweet the pleasure,
Sweet is pleasure after pain.
—*Dryden, Alexander's Faust.*

So great was the extremity of his pain, and anguish, that he did not only sigh but roar.—*Mathew Henry, Commentaries.*

There is purpose in pain,
Otherwise it were devilish.
—*Owen Meredith (Lord Lytton)*

You purchase pain with all that joy can give, and die of nothing but a rage to live.—*Pope, Moral Essays.*

Pain is no longer pain when it is past.—*Margaret J. Preston, Old Songs and New.*

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Why, all delights are vain, but that most vain,
With which pain purchas'd, doth inherit pain.
—*Love's Labor Lost,* Act 1, Sc. 1.

The scourge of life, and death's extreme disgrace,
The smoke of hell,—that monster called Pain.
—*Sir Philip Sidney.*

Nothing begins, and nothing ends,
That is not paid with moan;
For we are born in others' pain,
And perish in our own.
—*Francis Thompson.*

A man of pleasure is a man of pains.
—*Young, Night Thoughts.*

Key to the Parable

"Pop, what does the Bible mean by the people who swallowed a camel and strain at a gnat?"

"Oh, I suppose it means the people who swallow a fish story and choke to death on a fishbone."

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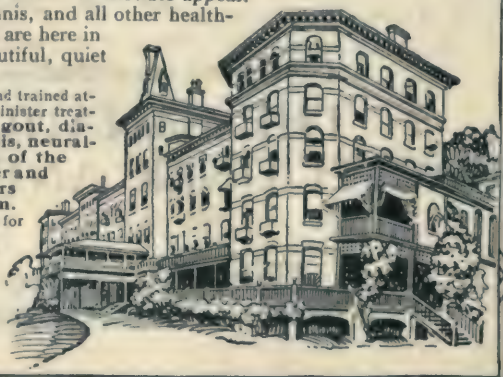

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Original Communications

NOTES ON THE DIFFERENTIAL DIAGNOSIS OF PULMONARY TUBERCULOSIS

By Jabez H. Elliott, M.B., Director,

and

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Clinic for Diseases of the Chest, St. Michael's Hospital, Toronto.

It has been alleged by some homely philosopher that experience is a great teacher, but that he charges like a specialist. And while it is a fact that most of us profit by our own mistakes, one must admit that it is a painful way of acquiring knowledge gained, at the cost of more or less mortification to ourselves, when our mistakes are pointed out by some colleague, and of loss to our patients when they are not.

In this age of efficiency it would certainly seem to be a step in advance if one could learn from the mistakes of others, and by noting the errors that are usually made, and the conditions that are apt to be confused, seek to avoid them by being forewarned. A disease that is so common as phthisis is bound to present difficulties in certain cases, nor is it feasible to resort to that one certain way of avoiding mistakes, by continuing to treat the patient without making any diagnosis one way or the other. Early recognition, of course, means everything in prognosis, and the patients themselves usually insist upon knowing definitely about their condition, once they suspect "they may have consumption."

At our tuberculosis clinic at St. Michael's Hospital we have splendid opportunities for observing some of the usual errors

that are made in diagnosis, and also for determining the actual diagnosis in each case. Patients that are suspected of being tuberculous are referred to the clinic, which they attend once or twice a week for observation, until they are transferred to a sanatorium, or determined to be non-tuberculous, or they attend for treatment while at work, should their condition warrant it. Patients that fail to come back are visited in their homes by city nurses, and induced to return. Thus, practically all of our cases are kept track of, at least long enough for a definite diagnosis to be made. Speaking in a general way from our experience, there seems to be a tendency to diagnose tuberculosis where it does not exist, rather than to miss a definite case. Most of the patients found to be suffering from pulmonary tubercle were transferred to us pretty promptly, after having been seen by the examining physician, although in a few instances well-advanced cases appear to have been overlooked, and to have continued attending a medical or other out-patient clinic. In the last 260 patients seen in connection with the tuberculosis clinic at St. Michael's, there were 32 cases that might fairly be taken to represent mistakes or uncertainties in diagnosis on the part of physicians that referred the cases. It is hardly possible in a paper such as this to take up all these cases in detail, but a few histories will be given, sufficient to illustrate typical examples.

Case I.

Patient was a child 13 years of age; she had been coughing for four years, ever since an attack of whooping cough. During this time there was free expectoration, the quantity of sputum in the twenty-four hours amounting usually to several ounces. There had been numerous attacks of hæmoptysis, usually two or more drams at a time.

Physical examination revealed a fairly well-nourished child; there was no fever and no evidence of emaciation. Examination of the chest showed nothing beyond a patch of dullness at the right base behind and numerous moist sounds heard over this area, although these signs persisted and were present each time the patient was examined. The movements of the chest were good, the apices clear, and there was no area of dullness to correspond to enlarged mediastinal glands. A radiogram of the chest showed no increased hilus shadow, and was apparently normal in all respect. Repeated sputum examinations were

negative as regards tubercle bacilli. A diagnosis of bronchiectasis following whooping cough was made.

The above case is typical of a group of three cases of bronchiectasis in children, referred to us as cases of tuberculosis. All three patients complained of cough, with a large amount of sputum present for years. Hæmoptysis occurred in every case, and in each the onset followed an attack of whooping cough or measles. In considering the question of tuberculosis in these cases it should be remembered that true pulmonary tuberculosis is rather rare in children. In our series there was only one case of the adult form of pulmonary tubercle in those under 15 years of age. Mediastinal gland tuberculosis is the common form in children, and in these cases one expects to find an area of dullness, to the right or left or behind the sternum, corresponding to the enlarged mediastinal glands. As a rule this is quite easy to map out with light percussion, because of the thin chest wall present in children. If a radiogram be taken, the enlarged hilus and mediastinal shadow confirms the results obtained by percussion. The tuberculin test in children is usually considered of first importance, and certainly is of more value in children than in adults. A tuberculin reaction in a child under ten years of age can usually be accepted as a valuable evidence that the child is tuberculous. In two of these cases of bronchiectasis the tuberculin reaction was absent, and in the other case the one whose history is given, it was slightly positive.

As regards bronchiectasis, this condition probably accounts for many of the chronic coughs of children, and results as a sequel of broncho-pneumonia. The cough is apt to be paroxysmal, the sputum large in amount, up to eight ounces in the twenty-four hours, and hæmoptysis usually occurs at some time in the disease. The physical signs are not prominent, and usually consist of patchy dullness with fine rales. Cavernous breathing, cracked pot note and other signs of cavity are seldom obtained, but the signs show a tendency to persist, and the base of the lung behind is the part usually affected. Signs limited to the base, a part of the lung practically never alone the seat of tuberculosis, combined with the history of a chronic cough, dating back to an attack of measles or whooping cough, are important points in reaching a diagnosis.

Case II.

A farmer, 46 years of age. He complained of cough and expectoration for some weeks. Several attacks of hæmoptysis, about one dram at a time. Gastric symptoms were prominent, and consisted of anorexia and distress after eating, with nausea; these were attributed to swallowed sputum, which perhaps is often the cause of dyspeptic symptoms in tuberculosis. There had been a loss of thirty pounds in weight in two months.

Physical examination of the chest revealed evidence of a bronchitis, but there were no localizing signs at the apices. The heart was noticed to be enlarged, and the second aortic sound increased. The systolic blood pressure was found to be 240 m.m. The urine showed a heavy cloud of albumen and casts. Eye-ground examination discovered advanced albuminuric retinitis in each eye, with stellate figure at the macula, and numerous striated hæmorrhages. A diagnosis of chronic nephritis was made.

In this case the usual symptoms of chronic nephritis, headache, dizziness, and nocturnal frequency of micturition, were all absent, and it goes to show the relative unimportance of the history, as compared with a careful physical examination. The gastric symptoms all cleared up under treatment, consisting of free saline catharsis and were evidently uræmic in nature. The patient's bronchitis was apparently only casual, as it also entirely disappeared in a few days. Vision was good and was quite unaffected by the extensive retinal changes present.

That chronic nephritis may be confused with pulmonary tuberculosis is shown by the fact that there were four similar cases in our series. Hæmoptysis was present in two of them, and must be regarded as a further evidence of the hæmorrhagic tendency, that more commonly shows itself in the form of epistaxis, cerebral or retinal apoplexy.

In out-patient and hospital practice generally, one is impressed more and more with the frequency of hypertension, with or without an associated nephritis, in persons over forty years of age. The symptoms are so inconstant and so variable that the routine use of the sphygmomanometer is the only sure way of recognizing these cases.

Case III.

A young woman, aged 21 years, admitted to hospital with a rather indefinite history. She had been sick in bed for ten

days, but before that had a cough for some time. She had been losing weight and feeling run down for some weeks. Some hæmoptysis before coming into hospital.

On admission, patient had a fever of 103 degrees, with a correspondingly rapid pulse. She was pale and rather emaciated; there were definite signs of consolidation at the left apex, consisting of marked dullness on percussion, bronchial breathing and numerous moist rales. Under observation the temperature fell to normal, and the signs in the lungs entirely cleared up. A diagnosis of resolving pneumonia of the upper left lobe was made.

There were two such examples in our group. These cases of upper lobe pneumonia, if seen during the later stages after resolution has set in, are very apt to be confused with phthisis. The marked apical involvement, with numerous rales, is so very suggestive of tubercle, that one is apt to fall into error, and give an unnecessarily grave prognosis. The history ought to furnish considerable help, but often does not. For while the onset of lobar pneumonia is usually acute, it is often preceded by a period of debility when the patient may have fallen off a few pounds in weight, and may have had more or less bronchitis. Mistakes can only be avoided by remembering that upper lobe pneumonia is rather common, particularly in children and young adults, that the signs of consolidation are apt to be more marked in a case of pneumonia, the dullness more absolute and the breathing more definitely bronchial, than one usually associates with tuberculous disease. In doubtful cases it is better to reserve judgment, and watch the progress of events for a few days before committing oneself.

Case IV.

Patient a man of 60 years of age, was sent into hospital with a diagnosis of pneumonic phthisis. He gave the following history:—About a month and a half ago, while at work, he noticed himself feeling rather ill and weak. He continued at work for a few days, then went to bed, and had been in bed a full six weeks before being admitted to the hospital. He had spat blood during the early days of his illness, but none recently. There was profuse expectoration, six ounces each day. Fever was absent and the pulse rate was not above 80. Patient seemed fairly comfortable and had a fair appetite.

Examination of the chest showed signs of consolidation,

limited to the right lower lobe, and numerous moist sounds were heard over this area. The apices were clear. A diagnosis of unresolved pneumonia was made, and later verified by the circumstance that the signs slowly cleared up, the expectoration lessened and finally ceased, and the patient left the hospital three weeks later, apparently cured.

The foregoing case illustrates a mistake in diagnosis that should never be made. The pneumonic phthisis of Osler is a rare form of pulmonary tuberculosis. We had only one example of it among our 150 cases of pulmonary tubercle included in this series.

Marked constitutional disturbance is never absent, the patient appears to be, and certainly is, very sick; there is fever of a hectic type, with an increased pulse rate; little desire for food and rapid wasting. Severe night sweats are the rule.

The physical signs may simulate lobar pneumonia, in that there is massive consolidation of a whole lobe, or for that matter the whole lung; but while the base may be involved, it is always secondary to an apical lesion, and one rarely or never finds pulmonary tuberculosis affecting the base and leaving the apices clear.

Examples of rarer diseases that were confused with pulmonary tuberculosis are the next two cases.

Case V.

History was unobtainable, as patient spoke a Russian dialect that could not be interpreted. He was pale and thin, ran an irregular fever of a hectic type, and had several severe attacks of hæmoptysis, of half a pint at a time. Chest examination was negative, but in view of the fact that cases of tuberculosis that have the so-called hæmorrhagic onset often show few physical signs, and considering the fever, cough, and rather wasted appearance of the patient, incipient pulmonary tuberculosis was thought of. In a few days, during which patient had repeated attacks of hæmoptysis, some blood clots appeared in the stools. A diffuse purpuric rash developed, eye-ground examination showed extensive, large, retinal hæmorrhages, and the diagnosis of purpura hæmorrhagica was clear. The patient was given horse serum hypodermically, as well as a large transfusion of whole blood; but to no purpose, and he died a few days later.

Case VI.

Patient was admitted to hospital, complaining of hæmoptysis. Six months before he had been in hospital with acute rheumatic fever and endocarditis, his heart condition being diagnosed at this time as aortic stenosis. The patient himself was convinced he was suffering from tuberculosis, and wished to be transferred to a sanatorium.

Examination revealed a marked systolic thrill over the pulmonic area. On auscultation there was a loud, rough systolic murmur heard all over the precordium, but with maximum intensity in the pulmonary area. The second pulmonic sound could not be heard, although the second aortic was clearly audible over the aortic area. The pulse was full, and quite unlike the anacrotic pulse of aortic stenosis. A patch of dullness, with moist sounds, was disclosed at the base of the right lung; and a diagnosis of pulmonary stenosis, with infarction of the lung, was made. The hæmoptysis ceased, and the patch of dullness cleared up under observation.

This was the only case of heart disease that occurred in our series, and probably here the confusion was due to a certain diffidence in diagnosing pulmonary stenosis. This lesion is not so rare as most authors would lead one to think, being seen about as often as aortic stenosis.

Hæmoptysis is, of course, a common event in heart disease, occurring either as a rusty tinging of the sputum, or as a brisk hæmorrhage. In any case it is usually due to passive congestion of the lungs, and as it has become pretty firmly established that tubercle does not flourish in that kind of soil, mistakes in diagnosis are seldom made. We did not find a single case of mitral stenosis being confused with pulmonary tuberculosis.

The remainder of the cases that go to make up the 32 for the most part represent a lack of skill in physical examination. Thus there were eight cases of bronchitis, two with hæmoptysis. Here, of course, the diagnosis depends upon the facts obtained in the history, and the presence or absence of localizing apical signs. There was one case of gastric ulcer, and this was the only instance where hæmatemesis was confused with hæmoptysis, and it would appear that the mistake is seldom made in actual practice.

Hæmoptysis is an important symptom in a pulmonary tuberculosis, and occurred in 36 per cent. of our cases. However,

hæmoptysis does not always mean phthisis, and most of the mistakes in diagnosis arose from a lack of appreciation of this fact.

The characteristic thing about the hæmoptysis of tubercle is that it is apt to be considerable, at least a half to a whole dram in amount. While a mere trace or streaking of the sputum with blood more usually only means bronchitis or passive congestion.

The symptoms of the disease are too well known to deserve more than passing mention. In our group of cases the symptoms that the patients complained of, given in the order of their frequency, were:—Cough and expectoration, hæmoptysis, loss of weight, weakness, pain in the chest, night sweats, gastric symptoms, hoarseness, dyspnœa.

Night sweats, as a rule, indicate fairly advanced disease, as does dyspnœa. Gastric symptoms, consisting of anorexia and dyspepsia, seemed in some case to be due to the habit of swallowing sputum, and were present in thirteen cases. Hoarseness is significant of laryngeal involvement.

Phthisis is rightly regarded as an infectious disease. That the infection occurs as a childhood infection, following exposure during infancy or childhood, is the view that is largely held by most observers. Some go as far as to state that in every case inoculation occurs during the first decade of life, and that adult tuberculosis represents a lighting up of an old, formerly latent, focus of disease. In this connection our figures may be of interest.

We could get no history of exposure in the great majority of cases. This may be due to the fact that many of our out-patients are immigrants, who have drifted away from their homes, and have no knowledge of what disease the various members of their family have died. Others have forgotten, and some seem unwilling to disclose details of their family history. In nineteen cases we obtained a history of exposure before the age of fifteen years. In seventeen cases exposure occurred during adult life, eight of these were cases of women who had apparently contracted the disease from their husbands, and the remainder had lived in more or less intimate contact, for a considerable time, with persons suffering from open tuberculosis. Of the patients who had apparently contracted the disease as a childhood infection, six gave a history of mother and father both dying of phthisis, presumably having contracted

the disease from each other. Eight of our patients had children who were tuberculous.

In view of these facts, and others, one seems justified in concluding that children are extremely susceptible to tuberculosis, and that in many cases of adult tuberculosis the disease is contracted during childhood. On the other hand, infection would seem to occur, in some cases, during adult life as well, particularly if the contact has been an intimate one, as between husband and wife.

We found several instances of mothers, with nursing babies, developing active tuberculosis. Evidently the strain upon their health, imposed by this addition to their other burdens, produced a lowering of their resisting powers, followed by activity in some, until then, quiescent focus.

Our facilities at St. Michael's Hospital are such as are enjoyed by every physician in his own office. We have no elaborate equipment, and depend largely upon the ordinary methods of physical examination. Very good radiograms are available, but we have no fluroscopic screen. The patient is seated on a stool for examination, and this we find better than using a couch, because when the patient is seated, instead of lying prone, one can often notice the drooping of the shoulders and arm on the affected side that occurs so frequently in incipient cases. Localized retractions are seen better with patient sitting, and the expansion of the two sides is more readily compared. Light percussion we have found most serviceable, and would emphasize the importance of the apex of the lower lobe, immediately internal to the root of the spine of the scapula behind, as a favorite site for early signs to be found. In particular, crepitations after coughing are very significant evidence.

As regards the tuberculin test, the intracutaneous test is the one in use at the clinic. A sufficient quantity of Koch's O. T., diluted 1 in 200, is prepared every two weeks. It cannot be relied upon if kept for a longer period than three to six weeks. The diluting fluid consists of .4 per cent. carbolic solution; this is slightly analgesic to the skin, as well as antiseptic. A one c.c. record syringe, graded in tenths and hundredths of one c.c. is used and 1-100 c.c. of the tuberculin solution is injected superficially into the substance of the skin, as superficially as possible.

A focal reaction has occurred in very few cases, as shown by increased cough and sputum, and by increased signs, rales,

etc., at the affected apex. A general reaction, fever and malaise, occurred in one or two instances. As a rule there is nothing more than a strictly local reaction at the point of injection of the tuberculin, and in spite of the occasional focal and general reactions mentioned, we regard the test as a quite harmless one, and have seen no objectionable results from its use. A reaction has definite characteristics. If observed at the end of twenty-four or forty-eight hours there appears at the site of injection a papule with a reddish blush, surrounded by an areola of hyperæmia or congestion. The papule varies in size from that of a split pea to the size of a quarter dollar, and if felt between the thumb and finger is found to be indurated. At times it is vesiculo-papular. The second zone of congestion varies, and may be from 1½ in. to 2½ in. in diameter. The hyperæmia soon fades, and is usually entirely gone by the third or fourth day. The indurated area fades more slowly, becoming a dull red; it may take two to five weeks to disappear.

This reaction is to be preferred to other cutaneous tuberculin tests, there is no scarifying of the skin and the danger of a dirt infection being mistaken for a positive reaction is avoided. A measured quantity of tuberculin is used in each case, and when the physical signs are taken in conjunction with the degree of local reaction, additional information regarding the prognosis is obtained. Thus, if no evidence of active tuberculosis is found on examination of the chest, a weak reaction would seem to indicate an old healed lesion, representing an infection of some years' standing. A weak reaction in the presence of active physical signs would seem to indicate a poor resistance on the part of the patient or a severe toxæmia, and would seem to warrant a grave prognosis, at least for a time. A strong reaction would indicate good resistance to a recent infection, and is a favorable sign. Except in very young children, a tuberculin reaction can only be properly interpreted in conjunction with all the other features of the case. The objection to the test is that it does not distinguish sufficiently between latent and active tuberculosis. We obtained a definite i.c. reaction in six cases that were clinically non-tuberculous, and in five other cases, classified as "doubtful pulmonary tuberculosis" that would, perhaps, have been included as non-tuberculous, had the tuberculin test been omitted.

As regards the sputum examination, we do not pay as much attention to this, perhaps, as we might. The demonstration

of tubercle bacilli in the sputum furnishes proof of the presence of tuberculosis in the lungs, but to rely upon this for our diagnosis would be to miss altogether most of the incipient cases. If one considers what a small part of the sputum is examined, at best only a loop full or two, out of, perhaps, ounces of sputum, in the twenty-four hours, and that most of this is simply bronchial mucus, it would seem almost like looking for a needle in a haystack, and be the greatest kind of luck if bacilli were found. One can recall a case where sixty-four sputum examinations were negative, and the sixty-fifth positive, and other cases where repeated sputum examinations were negative, and post-mortem examination revealed extensive phthisis of both lungs. The fact that tubercle bacilli cannot be demonstrated in the sputum, really means very little, and to consider cases as open cases where bacilli are found, and others as closed cases where bacilli were not found, would seem rather arbitrary. In forty-one cases of pulmonary tuberculosis in which the sputum was examined, bacilli were found in sixteen cases and not found in twenty-five cases. Most of the examinations reported negative were repeated several times. The sixteen positive cases, with three exceptions, were cases of advanced disease with extensive lung involvement.

The tuberculosis clinic at St. Michael's Hospital is one of the associated tuberculosis clinics which, working in co-operation with the Department of Public Health, is prepared to look upon each case diagnosed as tuberculous, not only as a patient for treatment, but as well a part of a great public health question.

The four great teaching hospitals in the city—the General, the Western, St. Michael's and the Hospital for Sick Children —have organized their chest clinics, so as to avoid overlapping, and are endeavoring to play their part in the problem of prevention of tuberculosis. Each is prepared to look after the tuberculous poor in its own district and advise as to the disposition of each individual case. A number of patients are seen as indicated above, who, thinking they have tuberculosis, are reassured; others who must remain at home are educated in the proper way to look after themselves, while others are transferred to hospital or sanatorium for treatment and as a means of isolation from their families, especially from their children.

A majority of our patients seem to recover and continue

with their work and the rearing of their families. It may not be feasible to eradicate human tuberculosis, as might be done among a herd of Holsteins by slaughtering or removing all the infected animals, but the incidence of the disease can be much lessened by intensive public health work, assisted by the diagnostic and therapeutic aid offered by the associated clinics and by the hospitals and sanatoriums in which the city maintains the patients referred by the clinics.

EDWARD JENNER, 1749-1823

Remarks Made on Presenting a Portrait of Jenner, 6th March, 1917

By John Ferguson,
President of the Academy of Medicine, Toronto.

In presenting this portrait of Jenner, I feel that I have a special right to do so. When in Britain in 1880, I became acquainted with Dr. Hugh Clark, who, as a young man, had been an intimate friend and patient of Jenner. Dr. Clark was ever delivered to speak of the fine qualities of head and heart possessed by that great men; and, on one occasion, said that he could think of no better words to express his feelings regarding him than by recalling the words of Antony over the body of his friend Brutus:

> "His life was gentle, and the elements
> So mixed in him that nature could stand up
> And say to all the world, 'This was a man.'"

Jenner was only five years of age when his father, the vicar of Berkeley, died. His primary education was secured for him by his eldest brother, Stephen, who sent him to study under Rev. W. Clissold. At a very early period in Edward's life he manifested a marked fondness for the study of nature, and was an active collector of fossils and botanical specimens.

His medical studies began in 1770, at Sadbury, where he became apprenticed to Daniel Ludlow, as surgeon of that village. The year following he went to London and entered St. George's Hospital, being at the same time a resident in the home of the famous John Hunter. In 1771 he was commis-

sioned by Sir Joseph Banks, the eminent scientist and navigator, to arrange and describe the specimens that had been brought home by Captain James Cook from the South Seas. He performed this task so well that he was offered the post of scientist to Cook's second voyage, but he declined the offer.

In 1773 he commenced practice in Berkeley, where he remained all his life. During his spare time he took much interest in natural science, and wrote on fossils, botany and ornithology. He was fond of playing on the flute and violin. His style of dress was simple and neat, his usual costume being a blue coat, top boots and silver spurs.

He took an interest in the formation of medical societies, and contributed papers on the temperature of animals, on valvular disease of the heart, on angina pectoris, on ophthalmic, and on cowpox, and a number of other subjects.

In 1788 he was elected a Fellow of the Royal Society. In March of the same year he was married, and John Hunter acted as godfather to his first born son. In 1792 his practice became so large that he was compelled to give up surgery and midwifery. In this year the University of St. Andrews conferred upon him the degree of M.D., *honoris causa*. During these years he had been making his observations on cowpox, or variolæ vaccinæ. In 1794 he passed through a severe attack of typhus fever.

From this period on his attention was given almost entirely to the study of cowpox. On 14th May, 1796, he vaccinated James Phipps, a boy of eight, with lymph taken from the hand of Sarah Nebrunes, who was suffering from cowpox. The lymph acted well on the boy. On 1st July, 1796, Jenner inoculated the boy with smallpox, but it did not take.

His first account of his observations and experiments were sent to the Royal College of Surgeons. It was not read at any society. In 1798 he applied to the Royal Society for the privilege of reading his manuscript, and received the following from the President:

"You should be cautious and prudent, that the credit already gained by your communications to the Royal Society, and that you ought not to risk your reputation by presenting to that learned body anything which appeared so much at variance with established knowledge, and withal so incredible."

However, in this year he published in London his observations, which will ever remain a classic. The title of his

small book was "An Inquiry into the Causes and Effects of Variolæ Vaccinæ, a Disease Discovered in Some of the Western Counties of England, and known by the name of Cowpox." The book contained a number of colored plates. He came to the conclusion "that the cowpox protects the human constitution from the infection of smallpox." In 1800 he published further observations; and, again, in 1801.

From that date onwards he made several visits to London with the object of securing the co-operation of influential persons. He stayed with Lord Egremont, and later the Duke of York took an interest in the formation of an association for the purpose of supplying pure lymph. The Duke of York accepted the dedication of the second edition of the "Inquiry." In 1800 he was requested by the Commander-in-Chief to vaccinate the 85th Regiment.

In 1799, Dr. Waterhouse, in Massachusetts, published an account of vaccination under the title, "Something Curious in the Medical Line."

In 1802 the Parliament voted him a grant of £10,000. In 1813 the University of Oxford conferred upon him the degree of Doctor of Physic, *honoris causa*. He died on 26th January, 1823, at the age of 74.

There are many portraits of Jenner, but the one now presented is from the engraving by J. R. Smith. The portrait shows Jenner when he was in his 49th year, and had for its theme the following words of Jenner, written in 1798:

"While the vaccine discovery was progressive, the joy I felt at the prospect before me of being the instrument destined to take from the world one of its greatest calamaties, blended with the fond hope of enjoying independence and domestic peace and happiness, was often so excessive that, in pursuing my favorite subject among the meadows, I have sometime found myself in a kind of reverie. It is pleasant for me to recollect that these reflections always ended in devout acknowledgments to that Being from whom this and all other mercies flow."

Dr. Hugh Clark, who was himself a superior type of man, a widely-read scholar, and a keen judge of character, said to me that Jenner was patient and painstaking in his work, a skillful and hard-working physician, a devoted and sympathetic friend, and an affable and lovable man. He conformed in every respect to the words of Horace:

In se ipso, totus, teres atque rotundus.

PRESENTATION OF SOME RARE BOOKS AND A HISTORIC CANE, 3rd APRIL, 1917

By John Ferguson, M.D.,
President of the Academy of Medicine, Toronto.

On this occasion I wish to present to the Academy of Medicine, Toronto, four very rare and interesting books, and a cane of unique historical value.

1. The first book is "An Essay on Diseases Incidental to Europeans in Hot Climates, with the Method of Preventing their Fatal Consequences," by James Lind, M.D., F.R.S.Ed., Fellow of the Royal Society of Medicine at Paris, and of the Royal College of Physicians at Edinburgh and Copenhagen; late physician to the Royal Hospital at Haslar, near Portsmouth—to which is added an appendix concerning intermittent Fevers, and a Simple and Easy Way to render sea water fresh, and to prevent a Scarcity of Provisions in long voyages at sea. The Fourth Edition. London: Printed for J. Murray, 32 Fleet Street, 1788." This is a most interesting volume, and one of the very early ones on tropical diseases. The author has an excellent style, and his descriptions of the diseases mentioned are very clear. He gives an account of the diseases met with in the East and West Indies, in Africa, in North America, etc. It is worthy of note how he reasons about the causation, and sets aside very logically most of the causes that had been advanced. He does not, however, mention a *contagium vivum* nor the spread by insects.

2. The second volume bears this title, "Cheselden's Plates of the Human Bones Correctly reduced from the Original Figures; Accompanied with Concise Explanations for the Use of Students. Edinburgh: Printed for W. McWilliam and P. Brown, Nicolson Street; Ogles, Duncan, and Cochran; and T. Underwood, London, 1816." These plates, thirteen in number, are beautiful copper-plate reproductions of the originals by Cheselden. As a specimen of the art in book-making of one hundred years ago it is quite instructive. We think if students of to-day had this book for their text they would regard themselves as in luck on account of its simplicity and brevity.

3. The third one is on chemistry, and once belonged to Dr. W. T. Stuart, of Toronto, and his autograph on a front page. The book is described as "Familiar Letters on Chemistry and its Relation to Commerce, Physiology, and Agriculture, by Justus Liebig, M.D., Ph.D., F.R.S., Professor of Chemistry in the University of Giessen. Edited by John Gardner, M.D., Member of the Chemical Society. Third Edition. London: Printed for Taylor and Walton, Upper Gower Street, 1845." These letters read like good fiction, because they are the work of a literary artist, who at the same time was a close observer of the natural phenomena. In speaking of the coal deposits found in England he says, "May this expectation be realised! and may her excellent population be thus redeemed from poverty and misery!" This is quite different from what the German scientist of to-day would wish for the people of England.

4. The fourth book contains two parts, the first is "Physiological Essays Containing an Inquiry into the Causes which promote the Circulation of the Fluids in the very small vessels of Animals; and Observations on the Sensibility and Irritability of the Parts of Men, by Robert Whytt, M.D., F.R.S., F.R.C.P., and Professor of Medicine in the University of Edinburgh, 1755." The second part of the book is "An Essay on Dropsy and its Different Species, by Donald Munro, M.D., London: Printed for D. Wilson and T. Durham, at Plato's Head, in the Strand, 1755." Both of these parts are well worth studying. It is interesting what clear and advanced views Dr. Whytt had on the circulation through the capillaries; and Dr. Munro and the varieties of dropsy and their treatment.

These four books will prove attractive additions to the list of rare volumes now in the library of the Academy.

The cane which I present was the gift of King George IV., in 1830, to Benjamin Collins Brodie. It passed in the possession of his nephew, Mr. James A. Brodie, a druggist, who lived and died in Toronto. Mr. Brodie stated that the cane originally had an ivory head, that the present head had been put on by some one, but that the ebony shaft was genuine. He gave the cane to me, and I have pleasure in depositing it among the rare books and portraits now in the possession of the Academy. It will prove one more attractive addition to our medical archives. A Latin writer once said *Ex rebus antiquis eruditio oratur*, from ancient things may culture come.

Editorials

ONTARIO MEDICAL ASSOCIATION

We gave, in our last issue, the Provisional Programme for the next meeting of the Ontario Medical Association at Toronto, May 30th, 31st, and June 1st. The meeting will be opened at 10 a.m. The General Session will be opened at 2 p.m. with a Symposium on Venereal Diseases. Dr. Chipman, of Montreal, will deliver the Address in Gynæcology on "Treament of Prolapsus Uteri." At 4 p.m. there will be a garden party. At the evening session the President will deliver his address, and Dr. Christian, of Boston, will deliver the Address in Medicine on "Nephritis and Diuretics." On May 31st, the section meetings will be opened at 9 a.m. At the general session in the afternoon, Dr. Babcock, of Philadelphia, will deliver the Address in Surgery, on "Evolution of the Surgery of the Biliary System," and Dr. McKenty, of New York, will read a paper on "Laryngectomy." There will be a garden party at 4.30 p.m. In the evening session Dr. Sharpe, of New York, will deliver an Address on "Recent Advances in the Operative Treatment of Intracranial Conditions." In the forenoon of June 1st the sections will meet at 9 a.m.

CHEMISTRY AND THE WAR

We are told by the *B.M.J.* that the Registrar of the Institute of Chemistry has written an interesting

book on the work done by chemists in the war. The Government has secured the guidance of chemists and other men of science to assist in the investigation of inventions, and to bring their knowledge to bear on measures and devices of offence and defence. The laboratories of universities quickly became small factories for the preparation of drugs, etc., and for the examination of materials for "explosives." Several hundred chemists were engaged to assist in the laboratories. The staffs of the chemical department at Woolwich Arsenal, and many Government laboratories were enlarged. A number of chemists were given commissions in the army for scientific work, and, after the employment of poisonous gases by the enemy, trained chemists were enlisted for service in the field. Both Lord French and Sir Douglas Haig have spoken very highly of the work by this body of scientists which was obtained entirely by voluntary enlistments. The Registrar expressed the opinion that the State should have control of an organization of professional chemists which would at any time insure their efficient services to meet the requirements of the naval, military and air forces.

CANADIAN MEDICAL ASSOCIATION

As before announced, the Annual Meeting of this Association will be held in Montreal, June 13th to 15th. Professor Janeway of Johns Hopkins Hospital will deliver the Address in Medicine, and Dr. F. J. Shepherd, of Montreal, the Address in Surgery, and Dr. Charles J. Hastings, of Toronto, the Address in Public Health and Preventive Medicine.

PYLORIC STENOSIS IN INFANTS

We publish in this issue a summary of an interesting paper prepared by Drs. Gallie and Robertson, and read at a meeting of the Ontario Medical Association.

The authors point out that up to a few years ago Pyloric Stenosis was not recognized as a rule, and when the condition was suspected, the treatment was purely medical, which in serious cases was of no avail.

The most important matter in connection with this condition is to make a correct diagnosis. Fortunately, as the authors tell us, the symptoms are not obscure, and indeed are "very uniform"—so much so that the trouble can be detected with definite certainty, and with very little difficulty if the symptoms as described are carefully observed.

So far as we know, Dr. McKechnie, of British Columbia, was the first in Canada to describe definitely the symptoms, which he did in an excellent paper published about five years ago.

The symptomatology of complete destruction is also well described by Lowenberg in his book on "Infant Feeding and Allied Topics," recently published. He says that on account of the obstruction the food is vomited after remaining in the stomach a variable length of time. One might think that vomiting must occur after each feeding. This is not so, because the stomach becomes dilated, and the vomiting may occur only three or four times a day. He agrees with our authors as to the character of the vomiting, which he describes as "forceful, propulsive and projec-

tive." The other symptoms are constipation, loss of weight and strength, and a palpable pylorus. In addition we may learn something from the X-ray with the administration of Bismuth subcarbonate and by the charcoal test as used by some experts.

We are not now specially interested in experts, as we are thinking rather about the general practitioner. The latter should be able to make the diagnosis in all cases and should invariably get the assistance of an expert as in complete obstruction an operative procedure is necessary, and is in all cases difficult of performance.

THE MAPLE LEAF CLUB

The Maple Leaf Club, in London, England, was organized by Lady Drummond, of Montreal. The Honorable Mrs. Donald Greville loaned her handsome old house, Berkeley Square, to the Club. There are in the building about 700 beds. Good meals are given at very small prices: Breakfast, 16 cents; luncheon, 24 cents; dinner, 28 cents, and bed 24 cents.

Many ladies from Canada, especially Montreal and Toronto, have been, and are now voluntary waitresses. Among them is Miss Jessie Denison, of "Rusholme," Toronto, who, after assisting in the original house for a time, was placed in charge of one of the Branch Clubs. We do not know how many of these Branch Clubs there are, but several months ago there were three in London.

Mrs. Glazebrook, of Toronto, organized a similar Club, and has for her purpose the building formerly used by Dr. Walter McKeown. By permission of

Lady Drummond (gladly granted by the way) she has named it the Maple Leaf Club of Toronto. She is assisted by a number of ladies in Toronto, who give their services voluntarily as waitresses.

THE TRIANGLE CLUB

A Club very like the Maple Clubs has been organized by the Y.M.C.A. of Toronto. It is called the Red Triangle Club, and was opened April 14th. They have rented the old McCarron House, formerly a hotel, on the south-east corner of Queen and Victoria Streets.

This Red Triangle Club is the first Home for Soldiers opened by the Y.M.C.A. in Canada. If it proves a success similar clubs will be opened in all the larger Canadian cities. The Toronto Club has purposely been placed in the downtown district in order that it may be of most service to the class of men it wishes to serve.

News Items

Ontario Temperance Act

Drs. Clegg and MacLaren, of London, Ont., Dr. Ross, Hyde Park, Ont., and Dr. McNeill, of Arva, Ont., were fined March 28th for violating the Ontario Temperance Act by giving illegal whiskey certificates. Dr. A. MacLaren, of London, at once appealed to the High Court to have his conviction quashed, and the appeal was considered by Justice Chute, April 18th. The Judge held that although Dr. MacLaren gave 261 prescriptions for liquor between February 16th and March 17th inclusive, the Statutes say that there is no limitation as to the number of prescriptions that may be given within a limited time by a physician, and there is no reason to think that the physician was not stating the truth, as he considered he gave the prescriptions with the full knowledge that liquor was necessary for the health of the patients. The Judge also stated that no specific charge was made, but a charge simply that certain breaches of the Act had occurred without stating what the particular offence was.

The Feeble-Minded

The annual meeting of the Toronto Branch of the Provincial Association for the Care of the Feeble-Minded was held April 13th, in the Clinic Room of the Toronto General Hospital. Dr. C. K. Clarke presided.

Reports were presented from the various committees, all showing great activity. Mr. Gwynne read the recent Act passed regarding educational provision to be made for the feeble-minded.

Officers were elected as follows:—Honorary President, Dr. Helen MacMurchy; President, Dr. C. K. Clarke; Vice-Presidents, Mrs. A. M. Huestis, Prof. Peter Sandiford; Treasurer, Dr. T. R. Robinson; Secretary, Dr. Gordon Bates; Committee, Mr. J. K. MacDonald, Dr. C. J. Hastings, Dr. C. N. Hincks, Mr. W. W. Hodgson, Rev. Laurence Skey, Commissioner E. W. Boyd, Principal C. G. Fraser, Inspector Elliott, Controller Cameron, Mr. D. Chisholm, Major J. G. Fitzgerald, Mr. R. E.

Mills, Controller O'Neill, Mrs. J. B. Laidlaw, Mr. D. W. Gwynne, Dr. E. A. Bott, Miss E. Keyes, Canon Plumptre, Dr. Peter Bryce, Col. G. A. Williams, Father Minehan, Rabbi Jacobs, W. E. Raney, K.C., Dr. Margaret Patterson, Mrs. Alec MacGregor, Dr. Horace L. Brittain, Miss M. J. Clarke and Dr. F. J. Conboy.

Anti-Typhoid Inoculation

The Department of Militia and Defence have announced that for the twelve months ending December 31st, 1916, only 167 cases of typhoid fever were reported as having occurred amongst the many thousands of men of the Canadian Expeditionary Force in Canada. This comparative freedom on the part of the Canadian Expeditionary Force is seen to be most striking when it is recalled that during the Boer war one man out of every nine in the British forces in South Africa was invalided through this disease, and that in the Spanish-American war, of 107,000 men in the camps at Tampa, Florida and elsewhere, who had not left the shores of the United States, 20,000 contracted the disease. The remarkable change can only be attributed to inoculation. The Provincial Board of Health for Ontario has supplied to date all the typhoid and paratyphoid vaccine used by the entire Canadian Expeditionary Force (about 450,000 men). In all, nearly 600,000 doses have been supplied free of cost.

A new quarterly magazine, with the name of *Endocrinology*, has issued its first number. It is stated that it will serve as a bulletin of the Association for the Study of the Internal Secretions. In the first number editorial comments are contributed by L. F. Barker, Chas. Sajons, T. A. Williams, and the editor, Henry R. Harrower.

Personals

Dr. Julian Loudon went to Kirkfield for a holiday, March 31st.

Surgeon-General Carleton Jones went from Ottawa to Halifax April 11th.

Dr. E. B. Echlin, of Ottawa, visited Toronto March 26th, and remained one week.

Dr. Henry (Harry) A. Wright, of Oak Lake, Man., has removed to Winnipeg.

Dr. Alexander Davies, of Toronto, returned to his home after spending some time at Atlantic City.

Capt. T. B. Archibald, M.D., Toronto, went to Halifax, March 21st, and sailed for France March 27th.

It is reported that Dr. Geo. E. Armstrong, of Montreal, has relinquished his temporary commission in the C.A.M.C.

Dr. F. S. Minns has removed to 14 Bloor Street East, to the house formerly occupied by Dr. Richardson.

Lieut.-Col. Primrose, M.D., of Toronto, who returned to his home after the death of his son, has been recalled to the front.

Capt. R. W. Phillips, M.D., 618 Dovercourt Road, Toronto, was reported to be in a hospital camp, Hastings, England, March 27th.

Dr. George McDonagh, of Toronto, is still in New York City. He has, however, left the Memorial Hospital, and is living at Marseilles Hotel, 2 West 103rd Street.

Dr. Allen Baines, of Toronto, left for New York, April 14. He expected to visit Philadelphia, Washington, Baltimore, before his return.

Lt.-Col. Watt, M.D., of Winnipeg, D.M.S., London area, has gone to Cliveden, and Lt.-Col. J. M. McComb succeeds Dr. Watt as D.M.S. of the London area.

Major Graham Chambers, M.D., Toronto, after a considerable term as Commanding Officer at the Ontario Hospital, Orpington, was somewhat run down and went to London for a holiday March 23rd.

The Cross of the Legion of Honour has been awarded to Dr. J. A. Galliot, who for a time practised in Manitoba. When the war broke out he was recalled to France by the French Army Corps, and has been in active service ever since.

It was supposed that Colonel Ryan, M.D., of Kingston, would have returned before now to the Ontario Hospital at Orpington, England. It is now expected that he will be retained in Canada for a time at least.

Colonel J. A. Roberts, M.D., Toronto, after leaving Saloniki, was for a time commanding officer in one of the Canadian hospitals in England, and about April 1st left there to take charge of a new hospital, with a capacity of 2,000 beds, in Basingstoke.

We understand that Col. Jno. T. Fotheringham, C.M.G., in connection with his present work as Director of Medical Services to Invalids, will remain for a considerable time at least at Militia Headquarters, Ottawa.

Surgeon-General Fotheringham reached Toronto April 24th, and went to Ottawa to confer with the Minister of Militia, April 30th.

Capt. R. J. Wilson, as before mentioned, returned to Toronto on leave January 27th. While in England he had a serious attack of grippe in December, with a bad form of sore throat, which resulted in a pharyngeal abscess. His friends in Toronto were somewhat shocked at his appearance, as he looked very ill. We are glad to say, however, he "picked up rapidly."

Colonel Herbert Bruce, of Toronto, was "somewhere in France" when last heard from. Some of our citizens of Toronto were, indeed, pleased to learn that he was close at hand when our Canadian divisions were making their big drive over and beyond the Vimy Ridge. Some of the friends of the wounded were exceedingly glad to learn that their loved ones were being cared for by Colonel Bruce.

Obituary

EDGAR D. HARRISON, M.D.

Dr. A. D. Harrison, of Madoc, died at his home March 4th. He graduated M.D. from Queen's University, and after graduating commenced practice in Madoc, where he very soon attained success, and retained it up to the time of his illness.

DONALD ALEXANDER McCRIMMON, M.D.

Dr. D. A. McCrimmon died at Ripley, Ont., March 9th, aged 81. He graduated from McGill University in 1869, and soon after commenced practice in Lucknow, where he remained several years. He then went to Great Britain and did post-graduate work in London and Edinburgh. Soon after this he was compelled to give up work on account of ill-health.

JOHN LORENZO DAVISON, B.A., M.D.

The announcement of the death of Dr. Jno. L. Davison on the morning of April 20th, caused deep regret and profound sorrow in his numerous friends. He graduated B.A. from the University of Toronto in 1880 and M.D. from Trinity University in 1884. After receiving his medical degree he went to Great Britain for post-graduate study, and while there became a member of the Royal College of Surgeons, Ireland. He returned to Canada in 1885, and commenced to practice in Toronto. He very soon achieved success in his profession, and was recognized during the whole of his professional career as an excellent physician and an expert therapeutist. He was very soon appointed to the staff of Trinity Medical College, and was considered for many years one of the best teachers in that institution. For a number of years he took a great interest and an active part in many medical societies, especially in the Ontario Medical Association.

As a man he was straight and honest, and as a friend he was ever faithful and steadfast. He had a peculiarly charming personality, and was very much beloved by all who had the good fortune to come into immediate relation with him. He had the misfortune to suffer from arterio-sclerosis for some years, and had many severe attacks of angina. It was feared that one of his attacks, which occurred about ten years ago, would cause his death. At that time three of his friends watched at his bedside nearly a whole night, expecting his death at any minute. Notwithstanding this great disability, he kept in harness up to the last, although doing only consultation work for the last five months of his life.

He went to Napanee April 6th, to visit his brother, and while there became critically ill.

JOHN SIDNEY GRAY, M.D.

Dr. J. S. Gray, of Winnipeg, one of the most highly respected physicians of Manitoba, died February 11th, aged 67. He was a native of the Province of Ontario, and graduated M.D. from McGill University in 1876. He commenced practice in Winnipeg in 1881, and after some years of general practice went to England for post-graduate work. On his return to Winnipeg he confined his work chiefly to gynæcology. He was appointed Professor of Gynæcology in the University of Manitoba. He was also Registrar for the Manitoba Medical Council for about thirty years.

SIMON JOHN TUNSTALL, M.D.

Dr. Tunstall, of Vancouver, was one of the best known and most popular physicians of Canada. He was one of the most faithful supporters of the Canadian Medical Association, and was its president in 1904, at the meeting in Vancouver. He made frequent visits to the east, and was always heartily welcome, especially in Montreal, Ottawa, and Toronto. His many friends were greatly distressed to learn that he died at his home in Vancouver, March 1st. He graduated M.D. from McGill University in 1875. Soon after graduating he went out west, and settled in Kamloops, where he was for many years surgeon

to the C.P.R. during its construction. In 1892 he removed to Vancouver, where he continued to practice up to the time of his last illness.

CAPTAIN ROBERT HOME, M.B.

A cable from the British War Office, received April 26th, announced the death of Capt. R. Home, R.A.M.C., killed in action April 22nd. Captain Home went overseas in October, 1915, with the Seventeenth Field Ambulance. When he reached England he was transferred to the R.A.M.C. He was 26 years of age, and a graduate in Medicine of the University of Toronto. He had practised in Toronto nearly three years previous to enlistment. He was a demonstrator of anatomy at the University, and was also connected with Grace Hospital and the Toronto General.

MAJOR DAVID B. BENTLEY, M.D.

We have to record with very deep regret the death of Dr. D. B. Bentley, which occurred in England, April 7th. Dr. Bentley graduated from Trinity University in 1891. He soon after commenced practice in Sarnia, and in a short time acquired the reputation of being an excellent physician and also a broad-minded citizen. He was an intimate friend of the Hon. Mr. Hanna, whom he supported very strongly in his different elections.

He took for many years an interest in military matters, and when the war broke out he went overseas with the First Contingent, with the rank of Major in the C.A.M.C. After spending some time in the fighting line he returned to England, where he was placed in charge in a depot of surgical supplies. In December last he had an attack of influenza, from which he never fully recovered. About April 2nd he had an attack of pneumonia, which caused his death.

He was appointed a member of the Provincial Board of Health in January, 1911, and when the province was divided into districts for health purposes, he was placed in charge of District No. 1.

He was highly respected for his ability, very popular with all classes, and much beloved by those who knew him intimately.

Much sympathy is expressed for Dr. Bob Hillary (Lt.-Col. R. M. Hillary), because of the death of his son, Robert Stuart Hillary, killed in battle April 4th, aged 19.

Mrs. Robertson, wife of Dr. W. Edgar Robertson, died from pneumonia at the Presbyterian Hospital in Hong Chow, China, April 13th. Dr. Robertson at one time lived in Merton, Ont., and after graduating from the University of Toronto, M.B., in 1900, he remained for a time in Toronto City. Shortly after his marriage to Miss Smith, daughter of the late Rev. Nathaniel Smith, he went to China as a missionary accompanied by Mrs. Robertson.

Mrs. Canfield, wife of Dr. F. D. Canfield, Ingersoll, died April 17th, after a short illness, from pneumonia. She was a daughter of the late James Noxon, for many years a prominent manufacturer of Ingersoll, and afterwards a resident of Toronto for some time. She was also a sister of Mr. W. C. Noxon, of Toronto. Mrs. Canfield was very well known in this city, and was much beloved by all her friends.

ONTARIO HEALTH OFFICERS' ASSOCIATION

Programme of sixth annual conference of health officers, on Tuesday and Wednesday, May 29th and 30th, 1917, in the Medical Building, University of Toronto.

TUESDAY.

10.00 a.m.

Registration of Members.

11.00 a.m.

"How to Control Venereal Disease." Gordon Bates, Toronto. Discussion opened by Drs. C. H. Hair, C. E. Trow, B. P. Watson.

This important subject, as well as all others upon the programme, is open for the free discussion of all members and visitors.

Symposium on "Infantile Paralysis."

"Poliomyelitis." H. W. Hill, London.
"Clinical Studies of Infantile Paralysis." W. J. Durocher, Windsor; G. R. Cruickshank, Windsor.
"Some Clinical Forms." F. T. Green, Stoney Creek.
"The Health Officer and the Immigrant." J. D. Pagé, Quebec.
Appointment of Nomination Committee.
Committee on Papers and Arrangements.

2.00 p.m.

President's Address. A. J. Macauley, Brockville.
"Safeguarding the Health of Infants and Young Children." Prof. C. A. Winslow, Yale Medical School.
Address of Welcome. T. L. Church, Mayor, Toronto.
Address. Hon. W. D. MacPherson, K.C., Provincial Secretary.
"The Value of Public Health Nursing in the Control of Infant Mortality." Chas. J. Hastings, Toronto.
"The Public Health Nurse." J. F. Hanley, Almonte; Martin Powers, Rockland.
"The Adrenals." F. D. Canfield, Ingersoll.
"Rest and Sleep as Factors in Disease Prevention." Adam H. Wright, Toronto.

NOTE.—*On account of their large number, papers are strictly limited to 10 minutes; discussion to 5 minutes.*

WEDNESDAY.

General Session—Lecture Room.

10.00 a.m.

"Sex Hygiene." N. W. Woods, Bayfield.
"Mendelism." J. A. Roberts, Hamilton.
"Mental Defectives." Helen MacMurchy, Toronto.
"Tuberculosis, How Handled in London." D. R. Craig, Queen Alexandria Sanitorium.
"Tuberculosis, Relation of M.O.H. thereto." A. R. Hanks, Blenheim.
"The Public School as a Place of Instruction in Practical Sanitation." J. E. Jenner, Kingsville.
"Public School Cleanliness and Architecture in Relation to Public Health." M. E. Bruce Cooke, Picton.

10.00 a.m.

Section on Public Administration—North Lecture Room.

"Difficulties of a Municipal Medical Officer of Health." J. H. Bull, Holland Centre; D. D. Macdonald, Alexandria.
"Difficulties of a Rural Medical Officer of Health." D. A. Kidd, Trenton; F. H. Mitchell, Delaware Twp.
"How to Secure the Support of the Taxpayer in Public Health." Adam Thomson, Waterloo Twp., Galt.
"Trying to Educate the Public." H. Logan, Niagara Falls.
"Is the Public Health Act Getting Results?" A. Nichol, Sebringville.
"Relationship of the District Officer of Health to the Medical Officer of Health and the Municipality." G. F. Richardson, Sprucedale.
"Public Health to the Average Town, Ways and Means of Conducting." C. A. Patterson, Forest.
"Practical Points in Enforcement of the Regulations and Difficulties of the Medical Officer of Health." H. Ross, Clifford.
"Some Experiences of a Rural Medical Officer of Health in Enforcing the Public Health Act." W. Doan, Harrietsville.
"Some Rambling Thoughts of a Medical Officer of Health." F. King, St. Catharines.

2.00 p.m.

Section of Epidemiology—North Lecture Room.

Election of Officers.

"Measles, Complications and Treatment of";"Scarlet Fever, Observations On."J. C. Hutchinson, Haldimand Twp.

"Diphtheria and Diphtheria Carriers." A. H. Speers, Burlington.

"True Variola and the Varioloid Forms of Smallpox." J. P. Boyle, Casselman.

"Disinfection Following Communicable Diseases." R. K. Anderson, Milton.

"Disinfection, Effective Methods of and Reasons Therefor." James Campbell, Tottenham.

"Can Quarantine Regulations be Improved?" V. A. Hart, Barrie.

"Difficulties in Prevention and Control of Communicable Diseases in Towns." J. H. Powell, Welland.

"Public Health and Communicable Diseases." W. R. Mason, Parry Sound.

"Communicable Diseases in Rural Municipalities." Jas. McC. Potts, Stirling.

"Meningitis, Influenzal Type." C. Morrow, Metcalfe.

"Typhoid Fever in Rural Communities." S. F. Miller, S Woodslee.

The Question Drawer.—Members desiring information upon any public health question, the Act or Regulations, will please forward questions in writing by May 20th.

J. W. S. McCullough.
J. G. Fitzgerald.

The Committee have been unable to make satisfactory arrangements in the matter of reduced fares.

Members are advised to purchase regular return tickets.

Section 42 of the Public Health Act requires that every medical officer of health in the province shall attend the meeting.

The Ontario Medical Association meets in the Mining Building, University of Toronto, beginning on the afternoon of Wednesday, May 30th.

A. J. Macauley, *President.*
J. W. S. McCullough, *Secretary.*

AMERICAN RADIUM SOCIETY

Scientific Programme—Clinic.

Monday morning, June 4th, 1917, 8.30 to 9.30 a.m., New York Radium Sanatorium, 203 West 70th Street. Joseph B. Bissell, M.D., Director.

Morning Session, Hotel Vanderbilt, 10 *o'clock.*

Short Executive Session—Scientific Session.

President's Address. W. H. B. Aikins, M.D., Toronto.

"Radium in Dermatology." F. E. Simpson, M.D., Chicago.

Discussion—S. E. Sweitzer, M.D., Minneapolis. R. H. Boggs, M.D., Pittsburg.

"Radium in Gynæcology." John G. Clark, M.D., Philadelphia.

Discussion—C. Jeff Miller, M.D., New Orleans.
R. E. Skeel, M.D., Cleveland.

Afternoon Session—Hotel Vanderbilt, 2 *o'clock.*

"The Physics of Radium of Most Value to the Radiologist." C. H. Viol, M.D., Pittsburg.

Discussion—Wm. S. Newcomet, M.D., Philadelphia.

"Radium as An Aid in General Surgical Practice." John M. Lee, M.D., Rochester, N.Y.

Discussion—Maurice Rosenthal, M.D., Fort Wayne.

"Radium in Bladder and Rectal Work." Hugh M. Young, M.D., Baltimore.

Discussion—Winfield Ayres, M.D., New York.

"Histological Findings in Radiumized Tissue." Henry Schmitz, M.D., Chicago.

Discussion—Isaac Levin, M.D., New York.

General Exhibition and Discussion of Pictures and Specimens.

Evening Session—Hotel Vanderbilt, 7.30 o'clock.

Annual Dinner—Informal.

The second annual meeting is scheduled to be held on the day prior to the meeting of the American Medical Association.

"Who ever saw a perfect man?" asked an evangelist at a revival meeting. "There is no such thing. Every man has his faults, plenty of them."

Of course no one had ever seen a perfect man, and consequently the statement of the revivalist was received with silence. The revivalist continued:

"Who ever saw a perfect woman?"

At this juncture a tall, thin woman arose.

"Do you mean to say, madam," the evangelist asked, "that you have seen a perfect woman?"

"Well, I can't just say that I have seen her," the woman replied, "but I have heard a great deal about her, my husband's first wife."—*Ex.*

Physician to wife (upon receiving invitation to join three fellow-practitioners in a rubber of bridge)—Here I am, dear, called away again. Appears to be a difficult case, too. There are three other doctors on the spot already.—*Punch.*

Selected Articles

SOME RADIUM TREATMENTS

By George Elliott, M.D., Toronto.

During the past two years, whilst I have been conducting the practice of Dr. Graham Chambers, some thirty odd cases of precancerous lesions, rodent ulcers, and cancers of the lip and skin have come under my observation. As the prevention of cancer is attracting more and more attention each year, and as, judging from official statements annually issued from the office of the Deputy Registrar-General of Ontario, cancer is on the increase throughout the Province, if not in other parts of the Dominion, any treatment which promises good results in the way of prevention, should be periodically brought to the attention of the medical profession. The lesions above referred to have been upon different regions of the face and scalp, and the lower lip. One originating on the anterior surface of the mandible was referred to a surgeon, as it was too far advanced for either radium or X-ray treatment; and, indeed, proved too far advanced for the surgeon, the man only living some four or five months thereafter. One young man of some thirty odd years, with a cutaneous horn on the lower lip, who claimed he had been treated with "hours of radium," was also referred to the surgeon.

The object in reporting these cases is that they present certain points of interest; and, as well, to emphasize the readiness with which most of these conditions respond to radium or X-ray treatment, provided they are taken early. Still, however, as the cases recited below will show, sometimes most excellent and satisfactory results are obtained in epitheliomatous lesions of many years' duration. Although excellent and remarkable results may be obtained in the latter, it is the precancerous lesion which has gone on for several months, and even years, in spite of various treatments, which should receive special treatment such as radium or X-ray affords. Such lesions are persistent white spots on the lips or in the mouth; small black areas (simulating burns); thickened, warty areas, with sometimes rapid growth; skin abrasions

which will not heal in three or four months' time, especially in the man or woman of advancing years; local skin defects, as ulcers, warts, fissures, moles, tumors, birthmarks, scaly local patches of seborrheic dermatitis; the dirty yellow scales of senile life; keratoses; small telangiectases; occasionally a persistent spot of eczema; and the round, tense, glistening, pearly (sometimes pinkish) forerunner of rodent ulcer: such lesions should prompt the general practitioner, mostly in country places—for many of these lesions mostly occurring on the face may be justly considered, in some measure, due to almost constant exposure to rays of sunlight—to either employ, or advise, early, now-abundantly-proved measures for their removal, or correction.

The total absence of pain in the application of radium, the very slight pain in the reaction of it, the elimination of the horror of the knife which some patients will hold, and the exceedingly satisfactory cosmetic effect secured must bring down the balance in favor of this method of treatment, when weighed with surgical procedures. Perhaps sufficient time has not expired to state absolutely that the "cure" *will* be a permanent one, for that is what the patient requires. However, the fact is established that these precancerous lesions do remain cured, and there is as much ground for hoping that they will remain cured throughout the lifetime of the patient as do some of those which have been subjected to surgical extirpation. "Watchful waiting" for both methods!

Case I.

D.J.H.—Farmer, aged 62 years, came for treatment August 6th, 1915. He first noticed a small "blister," as he thought a "coldsore," on the lower lip of the left side, about the centre of the vermilion surface, midway between the mid line and the left commissure; that was some time in May previous. On examining the ulcer which had now formed, it measured about one inch from before backwards and outwards, and extended from near the junction of the skin and mucous membrane, on to the dental surface of the lip. In width it was about three-quarters of an inch. It was of irregular outline, the border being regularly beaded throughout. The base of the ulcer was uneven and secreted a slight discharge; also nodular and infiltrated. Between the finger and thumb it felt hard and firm. There was no evidence of lymphatic involvement, and no enlargement of submental, or submaxillary glands. It was considered to be a typical, characteristic epitheliomatous ulcer, and an operation was suggested for its

removal. The patient was very emphatic, however, that no knife would ever touch it. The reason for his strenuous opposition was sought, and it was ascertained an elder brother had died some eight years previously of a similar condition on the lower lip, after two years of treatment with plasters, etc., as well as two surgical operations. Thirty milligram hours of radium treatment were administered that day, and thirty the following day. He absented himself until August the 25th, when it was found the fore part of the ulcer was healed, not quite one-half. Radium was re-applied to the posterior part of the ulcer, ten milligram hours that day; twenty on the 27th August; twenty on the 30th. On the tenth of September his daughter reported no scab had formed as after the first application. On the 17th of September the patient returned himself. The lesion was found perfectly healed throughout, with a very small dimpled cicatrix on the vermilion surface in front. Up to the time of making this report —going on to two years—it has remained healed. The patient was a pipe smoker, but claimed he had always held the pipe on the other side of his mouth. He further claimed he never felt any pain or soreness at any stage of the duration of the reaction to the radium, or during the repair of the lesion.

Case II.

J.H.—Farmer and mail driver, aged 56 years, a younger brother of D.J.H., presented himself for examination on September 12th, 1916. He smoked very little, and had never had any severe illness. His father and mother had lived to a very old age, and had never had cancer. This patient also stated a small "blister" appeared on his right lower lip on the vermilion border, about midway between the middle line and the right commissure. A scab formed, and the lesion would not heal, and it had been going on for several months. Some treatment had been given on different occasions. There was some infiltration, though not marked; and no lymphatic or glandular involvement. With the first radium treatment that day of twenty milligram hours, the crust came off with the applicator, when it was noticed that a scab filled an oval ulcer, a half-inch in width from side to side. On the 14th of September twenty-five milligram hours of radium were administered; on the 15th, twenty. The patient returned in two weeks, having injured the lesion with a crust of bread, some hemorrhage resulting, and thus forming a rather large, black-looking crust. He was advised to be more careful in his eating,

and to report in six or eight weeks' time. He returned for examination on November 20th, with the lesion perfectly healed, the only noticeable trace of it, or the treatment, being a bare spot just below the vermilion border where the hair of the beard had been destroyed.

Case III.

R.G.—Widow, of apparent age, 55 years, was referred by Dr. J. A. Stevenson, Trenton, Ontario. She stated she had never had any severe sickness but just a little soreness in the muscles at times. She presented herself for treatment on the 4th of December, 1916, and stated she had had attacks of eczema on head and back, which went away in the summer time. Her mother's sister had a skin cancer removed from behind the ear about two years previously. About seven years ago a little water "blister" appeared just above the outer extremity of the left eyebrow. It would scab over, feel itchy; at times when the scab was scratched off, or knocked off, weep. In September, 1916, it began to enlarge, and when examined by me, was rather smaller than a five cent. piece. The surface of the ulcer was irregularly nodular, and the border rather even, but slightly rolled. There was very little infiltration; the discharge was always watery. The lesion, which was considered to be a rodent ulcer, appeared as though it might bleed readily. On Dec. 4th, twenty milligram hours of radium; on the 5th, the same; on the 6th, the same. Under date February 5th, 1917, the patient writes: "I am very glad to tell you the scab is off my forehead and my sore is gone. The skin is only a little red." The patient always considered this was a part of the eczematous condition from which she had suffered for a number of years.

Case IV.

Mrs. C.—Apparent age 65 years, came in December, 1915, referred by Dr. W. T. Parke, Woodstock, Ontario. The interesting point in this case is that the lesion occurred on the lower lip of a woman. There was a rounded ulcer with thickened border and base, the former being raised and quite regular in outline. The lesion had persisted for two years, crusts forming every little while; and the ulcer would not heal under repeated treatments. Radium was applied forty milligram hours in divided doses. Reaction in this case occurred on the eighth day with considerable pain. Two or three scabs formed in succession in the course of the following weeks, when the patient returned for examination some six weeks later. As there was still a little thickening, radium

was applied for another forty milligram hours. Late in the spring the patient advised that the ulcer had healed perfectly, and to date there has been no recurrence.

Case V.

Mrs. A.—Aged 82 years, referred by Dr. L. P. Bowers, Port Hope, Ont., Nov. 9th, 1915. About the middle of the nose of the right side, there was an ulceration with jagged edge, possibly the size of a ten-cent. piece, and filling the ulcer was a round, soft, blackened neoplastic growth, the size of a ripe cherry. This would bleed readily. The lesion was of several months' duration. Twenty milligram hours' radium was administered on the 9th, and thirty on the 10th. In January, 1916, the doctor reported it was going on fairly well. In reply to a request, Dr. Bowers wrote further, on March 20th, 1917: "She has made a good clean skin. There is just a discoloration, but smooth."

Case VI.

Mrs. M.—Apparent age 56 years, also referred by Dr. Bowers. The patient came for treatment late in January, 1916. There was a craterform epithelioma, of triangular shape, on the right ala nasi, midway between the tip of the nose and the naso-labial fold of that side. It was given fifty to sixty milligram hours treatment in divided dosage. Not having heard of the result of treatment, I wrote Dr. Bowers for information, to which he replied, March 20th, 1917—fourteen months afterwards—"The patient has made a splendid recovery—not a trace of the trouble."

Case VII.

D.B.—Farmer, aged 55 years, referred by Dr. J. A. McEwan, Smith's Falls, Ontario, presented himself December 12th, 1916. He has always enjoyed the best of health in every way. At the age of forty years, a small papule, which scabbed over, appeared on the upper lip under the left anterior naris. The lip was covered with a heavy moustache at the time. He would pick the scab off occasionally, and as time went on the papule began to ulcerate. When seen there was a large, scalloped out ulcer, the size of the palmar surface of the distal phalanx of the thumb. It extended from the left naso-labial fold over to the septum, which was also eaten through on the skin surface, to the depth of one-third of an inch. The ulcer extended down to the vermilion border of the lip, pretty nearly involving the entire surface of that half of the upper

lip. In depth it was almost down to the mucous membrane. The anterior floor of the nasal canal and the left surface of the septum were slightly involved, and for the past two years there was almost constantly a hemorrhagic plug in the left nostril. The ulcer had a scanty secretion and bled occasionally, the whole base of the lesion being a dirty brown color. It was diagnosed as rodent ulcer. Not much encouragement was held out to this patient of either amelioration, or of any good results being obtained by radium treatment. However, he was exceedingly anxious to have it tried —stated he had only heard of radium a week or so before—and would be satisfied if it could be retarded in its growth. Radium was applied twenty milligram hours on the 13th of December, two applications being necessary side by side to cover the lesion. Twenty milligram hours were also administered by tube in the cleft in the septum just above the philtrum. The patient returned January 16th, 1917, when almost the entire ulcer was filled in, and a good scar with very little retraction of the lip. A small ulceration remained just below the left nostril, which extended up into the nostril. The radium applicator was applied to that, one corner of it being inserted into the nostril so as to act upon the lower part of the septum. Thirty milligram hours were given; also tube for twenty milligram hours to the split skin in front of the septum. On the 6th of March, the patient again returned. There had been no bleeding from the nostril for two or three weeks, and it was quite clear of any blood clot. The outside ulceration of the lip was prefectly healed. As there was some slight thickening in the left naso-labial fold, radium was applied thirty milligram hours. The cleft in the septum was uniting by several bands of adhesions. To a very small surface of the septum which appeared a little eroded, twenty milligram hours was administered by tube.

This was a rather large lesion, of long duration, unsightly in appearance, and quite inoperable, which healed surprisingly rapidly and kindly, and presents a striking example of the efficacy of radium in those lesions which have even gone far beyond the precancerous stage.—*Dominion Medical Monthly.*

THE PSYCHOLOGY OF THE NATION

By Thos. Claye Shaw, M.D.Lond., F.R.C.P.,
Emeritus Lecturer on Psychological Medicine, St. Bartholomew's Hospital.

The mind of a country is determined by two factors, original temperament and environment. It is, therefore, a mobile state, liable to ups and downs of equilibrium according to the pressure of the forces brought to bear upon it; and its index is the emotional tone which prevails at the time being. The trend of temperament is the foundation of the optimism or pessimism of which so much is talked, and this emotional trend is greatly influenced by the authority of the environment in the shape of official dicta by the various State departments, by leading articles and prominent headlines in newspapers, by public lecturers, and so on.

The moral tone of a nation is a great asset when it is of the positive or cheerful variety, and it may be most injurious if of the negative or depressing type. Nothing reacts so on the physical bodily health of individuals as do these different emotional states, so that it becomes an absolute duty incumbent on those whose official position gives authority to their dicta to be careful in what they say, avoiding, on the one hand, the creation of a too highly charged atmosphere of optimism, and on the other, a condition of unjustified pessimism.

The mental level of a country is not a thing to be thoughtlessly trifled with—it means too much for its welfare to be the playground of those who exploit it according to their own passing moods, and much knowledge and experience is required from those who have the fashioning and moulding of the very sensitive mental barometer—generally termed the "morale" of the nation.

To determine how far the mental state of the country shall be influenced in this direction or that by those who control the tiller is always difficult and at times critical, for be it remembered that the people themselves know nothing; they are but plastic clay in the hands of those who have real information. There may arise occasions when it is right to use the tremendous lever of the knowledge of facts in such a way as to raise or

depress the emotional tone of the country by placing before the people matters in their best or their worst light, but unless the necessity of doing so is quite clear, much cruelty and harm may be inflicted, and it is quite as wrong to inflate with a false hedonism as it is to paralyze by an immoderate depression.

Above all, the confidence of us who have to trust in the honesty and judgment of those who really know should never be shaken, and when men say, "Tell us all the truth; we can bear it," they are postulating a state of mind which is by no means common to the nation in general. Can we bear always to hear the truth? There are many who can, but the majority are apt to run into extremes of joy or grief when really a neutral tint of emotional tone would be the best. Moods are contagious, and a wave of depression once set up by injudicious authority reacts on the community in all its relations—it affects especially the female mind, which is more emotional and impressionable than the other sex, and it tends to a lowering of the bodily health, with its attendant ills of insomnia, loss of appetite, recourse to restoratives of stimulants, and consequent malnutrition. Our enemies fail to understand the psychology of their own people; they feed them up with one-sided reports of a nature calculated to elate them and to make them tolerate trials more easily, and they drug their mental state by artificial stimulants, whilst by withholding all of a depressing nature they raise the spectre of mistrust when results are seen to be in dissonance with what should have resulted had the records been true.

To raise false hopes is as mischievous as to circulate ideas of an opposite character. To be told that on a certain day an event of a very satisfactory character will occur, and then to find the *coup manquê*, is to bring a misery which is quite unnecessary, and begets suspicion. People are apt to underestimate the effects of emotional shock; in their hunger for news they say they can stand anything, though as a fact they cannot and do not go through the crisis with immunity. They ignore the increased rapidity of pulse and heart strain, the mental tension and subsequent reaction, the loss of appetite, and the insomnia and dreams, all of which bring about attacks on the strength-capital and recuperative power, and in their call for information to satiate their inquisitiveness they forget how useful may be to the enemy the reports they so eagerly demand. It is not fair on the authorities to pester them for full reports

of occurrences. Even now it is probable that what we are told is in excess of what those in command really know to be advisable, but which in answer to popular clamor they feel compelled to divulge. There should be a reciprocity of forbearance and a tolerance by the public of scanty utterances when there may be real reason for brevity, and the Government should be as firm in its refusal to be forced by the public for knowledge which it would be almost criminal to publish as it is to commandeer what it requires for its own wants. Countries of greater experience than ours in the conduct of modern warfare limit their output of detail of events to what they consider the necessity of the moment; we, on the contrary, call for minutiæ which are of no real value to us, but which are of the greatest value to the enemy; e.g., we ask for details of the number of the craft sunk daily in the present submarine development. Such a recital can be of no service to us, but is of tremendous advantage to the enemy, who profits similarly by the daily reports of our casualties, whilst he carefully locks his own —as do also some of our Allies—in his bureaux. The mental tone of the nation has much changed since the beginning of the war. It has become so used to the contemplation of the horrors of war that it now regards as commonplaces events which a little more than two years ago would have excited the liveliest concern. We have become less impressionable, more determined to accomplish our purpose, and less given to exhibitions of feeling at any new developments of "frightfulness." We are not surprised at anything, we take it as a matter of course, but instead of saying, "How frightful!" or "How horrible!" as at first, we go to work with harder set mouths to anticipate or nullify, and we now employ without hesitation methods and practices which at one time we should not have thought it within our imagination to conceive. Without doubt one reason for this change in mental tone is that so much more of the impressionable part of the people is now busy and occupied. It has been brought so to face the realities of war in the care of the sick and wounded, in the make of munitions, etc., that these horrors have lost many of their terrors through familiarity. The mind of the nation is a new mind, a working, specialized mind, and where at first there was an atmosphere of apprehension, dread and wonder, there is now no time for sentimental contemplation—all are engaged in the absorbing question of how best and soonest to destroy the enemy. That this change

of tone has been all for good is certain. It shows that the people of this country are as adaptable for work as they were for luxury and *laisser aller,* and it will be interesting to note in future how the country can adapt itself to the new conditions which must arise. That the good effect of work of various kinds is very real is proved by the fewer cases of neurasthenia and general nervous ailments that are now met with in the consulting rooms of physicians, the lessened amounts of self-drugging, and the improved general health owing to the restriction in eating and drinking. The first shock of war having passed off, the country sees now more clearly than it did what has to be done if its object is to be gained, and it has settled down into a firm resolve to do its best to achieve success.

Such a mental state is one which helps it to preserve an equal balance—all the same, it is a condition of tensile strain which may easily be so reduced by injudicious tempering as to convert it into an inert instrument, or if tried too much may be broken and rendered useless; for strain means energy, and this latent power is a valuable potential, for it is an index of the degree of resolution and determination of the people. Our leaders call on the country to carry out their directions with generous compliance. They will not be disappointed if the nation understands that what is asked of it is conceived in the best way by those who alone have the opportunity of knowing. In return for this readiness the people have the right to expect that their feelings shall not be unduly worked upon and impressed into the scheme required, that official bluntness shall be blended with judgment, and that the individual tendencies of those who in any sphere have the duty of directing shall be subordinated, inasmuch as good or evil may result according to the way in which that sensitive medium—the mind of the nation—is handled.

Official utterance is a very sharp weapon, and if used incautiously it may go too deep and cause irreparable damage. The nation wants no anæsthetic; it can bear what pain it is put to—all it does ask is that it shall not be operated upon unnecessarily, and that the operator shall be competent, and shall not be merely exercising his 'prentice-hand for his own edification.—*Medical Press and Circular.*

Selections

Tuberculosis of the Tongue

The frequency of localization of tuberculosis processes in the tongue as evidenced from the reports of necropsies and from clinical experience is somewhat rare, and it is, therefore, interesting to note five cases of this condition, observed in the Mayo clinic, in Rochester, U.S.A., published recently by Dr. Luigi Durante in *Il Policlinico*. The reason of the relative infrequency of tuberculosis lesions of the tongue, an organ so close to the source of infection, is probably due to two factors: the peculiar structure of the lingual mucous membrane being resistant to direct penetration by the bacillus and also the natural resistance which all striated muscle presents to bacillary localization owing to the marked anti-bacterial action of glycogen towards all micro-organisms in general and to Koch's bacillus in particular. The age of the majority of cases of this disease is between twenty and sixty years, it is unknown in childhood when tuberculous lesions are frequent and widespread. These facts justify the conclusion that certain causes incidental to this period of life favor the occurrence of lingual tubercle, such as erosions of the mucous membrane produced by pipe-smoking, dental caries, and toxic glossitis, and also explain the relative frequency in the male sex. The beginning of the lesion is always characterized by specific connective-tissue formation in the shape of a tuberculous nodule situated either in the derma of the mucosa or in the lingual parenchyma, and from this origin two distinct clinical types follow, one in which development proceeds at the expense of the lingual derma, having characters approximating to those of cutaneous lupus, and the other where the intramuscular connective tissue is chiefly involved producing granulomata or being gummatous; they may closely simulate neoplasms or tertiary syphilis. Typical tuberculous ulceration has irregular outlines, with sinuous, soft, red edges, a yellowish base covered with easily bleeding granulations, and may occur in any part of the tongue, but has a preference for the edges and tip. The persistence of these two clinical forms, the ulcerative and the nodular, seems to be influenced by the condition and course which the tuberculous infection assumes in other parts of the body—that is to say, those forms which

maintain for a long time the nodular type accompany a tuberculous infection, usually in the lungs, of slow course and without tendency to break down, or else are strictly primary, while those forms which tend to become rapidly caseous are habitually concomitant with and secondary to deep and destructive lesions in other organs. In the five cases now published by Dr. Durante two occurred in females, and all between the ages of twenty and fifty years. As no necropsies were made the diagnosis of primary lingual tuberculosis arrived at in two cases in the absence of any other apparent tuberculous lesion has only a clinical and not an absolute value. In the other three cases it was secondary to, and a late episode of, broncho-pulmonary lesions. In four cases the type of lingual lesion was ulcerative, situated at the edge, and the result of a granuloma deep in the parenchyma. In the other case the type was nodular and had remained in that condition for ten years, and was the only tuberculous lesion ascertained to exist. In the remaining four cases the ulcerating stage was developed after three to four months. This shows that it is not so much the local site which determines the different anatomical aspect of a specific process, such as the tuberculous, as the conditions of reaction in the whole organism. There was glandular enlargement in the four ulcerative cases, but not in that where the intra-lingual granuloma remained intact. Clinical diagnosis was easy in three cases in which the ulcer in the tongue existed simultaneously with tuberculous pulmonary lesions. In all cases the nature of the lesion was proved, in two of them by excision and in the others by biopsies previous to treatment by cauterization.—*The Lancet.*

An Improvement in the Carrel Irrigation Technic

Tuffier (*Presse medicale,* December 28, 1916) points out that one of the inconvenient features of the intermittent irrigation of wounds by Carrel's method is the injection of fluid every two hours into tubes leading into the wound, thus not only disturbing the patient but placing a considerable burden on the attendants. He has found it possible to overcome these disadvantages by the use of an intermittent syphon device which can be regulated at will to discharge fluid at definite intervals of one to three hours. The device consists of a glass cylinder with inlet tube above, into the bottom of which is fixed a

Feeding School Children

School days are a period of rapid development in body and mind, and the demands of present-day civilization leave little time to parents for the careful consideration of what is the proper food that the laws of physiology require.

When food is hurriedly eaten and often bolted outright, the first of the digestive enzymes—ptyalin—scarcely enters into the digestive process at all. Thorough mastication of food, so necessary to produce and preserve serviceable and beautiful teeth, as well as excite the flow of saliva, threatens to become a lost art.

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smaller receptacle situated below. From the top of this small receptacle there extends up in the cylinder a glass tube, which curves downward upon reaching the top of the cylinder and opens near the bottom of the latter. The irrigating fluid being passed into the cylinder from the inlet above at a definite rate, rises in the cylinder and one limb of the tube until the bend in the latter is reached and syphon suction in the opposite limb is established, the entire contents of the cylinder then passing out into the smaller receptacle below and thence into the wound. For proper functioning of the device the syphon tube within must not be too large, or the syphon action will never come into play; again, the tip of the syphon tube must open obliquely —not transversely—otherwise the syphon action, once started, will continue indefinitely. The interval between discharges is regulated by adjusting the flow into the cylinder from above. The device is also available for intermittent aspiration of suppurating foci, constituting a species of pump which may be adjusted so as to come into action at intervals of any desired length.—*New York Medical Journal.*

The Social Evil in London

Sir Arthur Conan Doyle, in a recent letter to the *Times*, put in a plea for an attempt to solve a question which, though always a difficult and thorny one, has assumed a fresh importance since war began. Here are his words: "Is it not possible in any way to hold in check the vile women who at present prey upon and poison our soldiers in London? A friend of mine who is a special constable in a harlot-haunted district has described to me how these harpies carry off the lonely soldiers to their rooms, make them drunk often with the vile liquor which they keep there, and finally inoculate them, as likely as not, with one or other of those diseases which, thanks to the agitation of well-meaning fools, have had free trade granted to them amongst us."

Hereupon a discussion ensued in which several people, including the Bishop of London, took part. In opposition to Sir Arthur Conan Doyle's views, prominence was given to the undoubted fact that attempts to supervise prostitution had met with very little success even in those countries in which it had been given a most extended trial. To which Sir Arthur Conan Doyle replies that the present circumstances are exceptional and

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demand immediate and drastic measures. "The conscience of England may well be aroused. Presently she may stand at the bar before the sister nations, who will ask her, 'How have you cared for the boys who were sent to help you?' It will not be easy to find a reply. If we answer, as the Bishop of London has done, that some of them were themselves 'looking for trouble,' that will not, I think, condone the fact that all of them were placed under conditions of provocation which no men should be asked to endure. 'The pavement outside is blocked by the women lying in wait; they push open the windows in broad daylight and try to call the men out—they even force their way inside. The police seem powerless, though there are plenty of them about.' What can we say to the colonies when we are reproached for such a state of things as that? We can only make the miserable reply that our own youth has been sacrificed as freely and as needlessly as theirs." Further on in the same letter the writer says: "These women are the enemies of the country, and should be treated as such." The police ought at once to be empowered "to intern all notorious prostitutes in the whole country, together with brothel keepers, until six months after the war."

The feeling of the profession at large will certainly be heartily in favor of the views thus admirably expressed. That an evil cannot be completely stamped out is no reason for declining to take every possible means to mitigate it. Smallpox is not stamped out, neither is typhoid, but the incidence of these diseases has, by mitigation, been reduced to within very manageable limits. Because it is obviously impossible to lay all these vile harpies by the heels, the authorities and their advisers are apparently content to fold their arms and do nothing. If the evil could be reduced by one half, which it certainly could, an enormous gain would be effected.—*The Medical Press and Circular.*

"Susanna," the preacher said, when it came her turn to answer the usual question, "do you take this man to be your wedded husband, for better or for worse—"

"Jes' as he is, phason," she interrupted, "jes' as he is. Ef he gits any bettah Ah'll know de good Lawd's gwine to take 'im; an' ef he gits any wusser, w'y, Ah'll tend to 'im myself."—*Medical Fortnightly.*

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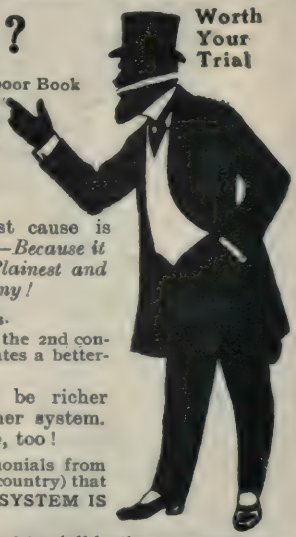

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Miscellaneous

The Recovery from Typhoid

In spite of the improvements in general sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safeguarded as in urban communities. Although many forms of treatment, designed to abort or cut short the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anæmia is, therefore, almost always in evidence when convalescence is first established. The quickest and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence, because it does not irritate or disturb the digestion, nor induce constipation.

New Test for Syphilis

McDonagh has recently published (Proceedings Royal Society of Medicine) a brief account of his new test for syphilis, which he terms the Emulsoid-gelatin or Gel Test. The latter is as follows:—If glacial acetic acid is added to blood serum, a syphilitic serum is readily identified through the rapidity of precipitation and resulting degree of opacity. Syphilitic sera contain much more protein nitrogen, more absorbed amino-groups, and more absorbed electrolytes. The sulphate of a heavy metal (lanthanum in the test) is dissolved to saturation in the acid in order to cause a greater precipitating action.

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The antiseptic employed is Dakin's sodium hypochlorite solution, the formula of which was given in our February issue (p. 51). This solution, being isotonic, of high bactericidal activity, and of low toxic or irritating quality, is specially adapted for use in this way. Chloramine-T is also employed.

Preliminary treatment is of importance. The operative field is painted with tincture of iodine, bruised and necrotic edges are trimmed away, and all foreign bodies very carefully removed.

The antiseptic is now applied, and it is here that the special technique is employed. The solution is instilled into the wound by means of a series of rubber tubes of small calibre, radiating from a larger tube, which in turn is fed from a glass reservoir. The terminal tubelets are about the size of a small rubber catheter; they are closed at the end, but are fenestrated with minute side openings through which the solution is discharged into the wound. The tube leading from the reservoir is fitted with an adjustable clamp whereby the flow is controlled or stopped, the object being not continuous irrigation, but rather to keep constantly moist the loose gauze dressing packed in the wound. The amount of solution employed varies, of course, with the nature and extent of the wound; for the average wound 10 ml. is released every two hours. The surrounding skin is protected by application of soft paraffin.

An important detail is the regular bacteriological examination of smears from the wound. This is done every second day, the results being entered on a suitable chart. When organisms are absent from the wound on three successive days, the wound is considered sterile. A bacteriological examination of the wound on the entrance of the patient to the hospital is, as a rule, negative, owing to the difficulty of obtaining a smear from the infected area. For the first day or two the bacteriological count rises; it remains high for a few days, and then descends. Wounds of the soft parts are sterilized in from five to eight days. After sterilization the wound is closed by means of sutures or adhesive straps. Wounds healed by the Carrel

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technique differ in appearance from those in which other methods have been employed. There is no redness, no tenderness, and no induration in the skin edges; the scars are supple, the wound edges pliable, and epithelial growth is rapid. Gentleness, thoroughness, and attention to detail are essential for success.—*The Prescriber.*'

The Natural Imperfections of the Body and the Limitations of Science

It is not uncommon to find persons who are confronted with some problem pertaining to the needs of the body making reference to "nature," or human instincts, or physiologic habits in explanation of the mysteries of our living organism. The author of one of the once familiar Bridgewater treatises, in which the discoveries of science were considered with reference to "natural theology," wisely remarked that "man not only sees means directed to certain ends; but ends accomplished by means, which he is totally unable to understand. He also sees, everywhere, things, the nature, and the end of which are utterly beyond his comprehension; and respecting which, he is obliged to content himself with simply inferring the existence of design."

Are we bound, in contemplation of this situation, to conclude that whatever nature provides is perfect in construction and function? The human body needs not to be conceived as a haphazard product of chance evolution; on the other hand it is not necessarily a disparagement for even the most devout person to realize that "nature" is often far from perfect. Richard C. Cabot has recently expressed this trenchantly by saying:

"We do not expect that our souls will be perfect. Our bodies are a part of nature and need not be assumed to be perfect. Presumably bodies and souls have a certain amount of freedom whereby they can go wrong. I see the body, like a great deal of the rest of nature, heroically trying to do right, often with extraordinary success, sometimes with pitiful failure; and I find this in no way irreconcilable with a belief in God. But I should find it impossible if I did not recognize that element of freedom to go wrong which I think is present in the whole of nature, and which I think makes nature sometimes beautiful,

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sometimes cruel, sometimes badly contrived, and sometimes marvellously ingenious."

Nor is instinct such an unerring guide that it can be trusted to direct us inevitably into the safest channel of physiologic behavior, as is often urged, particularly in respect to diet. What is interpreted as instinct is sometimes merely an expression of custom, habit or usage. We are told that a man is a creature of habits; he is quick to acquire new ones when his environment affords the opportunity, and he is prone to cling to the old ones when they minister to his sense of taste. Habits and cravings are far from being reliable indexes of physiologic requirements. Because man has maintained himself through the ages without precisely such scientific guidance as is available to-day it does not follow, as some are wont to state, that "scientific discoveries in the field of dietetics are academic rather than practical." Dr. Percy G. Stiles has admirably spoken the words of wisdom:

"A judicial mind will mould to a middle course. There need be no discouragement because the requirements are so many; on the other hand, it is not the part of wisdom to discount all that has come from the chemist's patient labor. Even though mankind has survived, we can conceive that human standards may be bettered. If this is true of the race, it is much more conspicuously true of ill-nourished individuals. We must consider in what respects the conditions of modern life have modified habits of diet, and whether, in any instances, the changes have been for the worse. The case is paralleled by that of the man who begins to consider the possibilities of disease. There are so many maladies to be thought of that the retention of health seems like keeping one's balance on a tight rope. Yet, if the preservation of health is really a tight rope performance, there is a factor which gives constant support, the remarkable stability of health in the normal subject—his constitution—which is like a gyroscope in its steadying effect. Here, too, it is rational not to ignore the dangers, but at the same time to recognize our relative security."

Let us break away from the assumption that there is anything incongruous in the fact that nature as expressed in the human organism is far from perfect; or that the incompleteness of the information of the present deprives it of any value for the improvement of a tolerably well-conducted human mechanism. There is no absolute truth knowable to the human mind.—*Journal of the American Medical Association.*

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The Wassermann reaction has undoubtedly come to stay as a diagnostic method. In many hospitals it is being made as much a matter of routine procedure as uranalysis. This is especially true of hospitals for the insane on account of the fact that so many mental diseases are due to syphilis and also that syphilitic and metasyphilitic psychoses may simulate the so-called functional mental disorders so closely as to make diagnoses difficult.

The most obvious disadvantage of the Wassermann reaction is its somewhat difficult technic. The average medical graduate who enters a hospital as interne is usually qualified to do uranalysis, Widal tests, and examinations for gonococci and tubercle bacilli, but he must be specially trained to perform the Wassermann test. Thus many of the large hospitals only have one member of the staff capable of performing this test and when he is incapacitated through illness or from other causes frequently Wassermanns are not done until he returns to duty and then he finds himself facing an accumulation of work, making him long for some method by which a great many of these tests could be done in a short time. Furthermore, in the population of large hospitals for the insane, there are often several thousand inmates who were admitted in the years before the Wassermann reaction was known. It being desirable to know whether or not they have syphilis, the laboratory technician of such hospitals finds himself burdened, during the time not occupied with his routine work, with the task of obtaining Wassermann reactions on all these patients. Here again he wishes for some wholesale method.

As a result the demand has arisen for a method by which this reaction may be carried out in large quantities accurately and without too much time and labor. These requirements seem to have been met by two British physicians, Doctors Fildes and McIntosh, who in the *Lancet* for October 28th describe their method. Space will not permit giving the details of the technic, which is that described in the thirty-sixth volume of *Brain,* page 193. The writers emphasize the care which should be used in labelling properly and permanently the specimens of blood. Every day the sheep's blood corpuscles are washed, the guinea pigs are killed and serum prepared, fresh saline solution is made up and the complement and the antigen control are standardized. The various reagents used are made up by a table which they give, according to the number of

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specimens of serum there are to be examined, the figures given being from thirty to 150. The test proper is done in a little less than two hours, which includes one hour which the tubes spend in the air incubator.

* * * *

The great advantage of a method which will enable the laboratory man to do 150 Wassermanns almost as easily as he can ten are so obvious as scarcely to require indicating. Wherever large groups of persons are under medical care this method will find its application. Let us suppose for example that this country does become involved in war. Volunteers will throng to the colors and it will be necessary to know what physical condition they are in and whether or not they are likely to break down under the strain of severe campaigning. The knowledge of the presence of syphilis will at least enable the military surgeon to foresee the possibility of paresis or cerebral lues or of any of the other protean forms which that disease may take. Any system which facilitates the wholesale weeding out of the unfit is likely to prove a blessing to this or any other country whose existence may depend upon the health of the armies, for, as many military experts have said, more campaigns have been lost by disease than by strategical blunders.—*New York Medical Journal.*

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The Canadian Practitioner and Review

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Original Communications

WORK, FATIGUE AND REST*

By Adam H. Wright, B.A., M.D.

In my boyhood days one of the questions often discussed but never finally settled, was this: "Will a boy who studies twelve hours a day during a term, learn more than one who studies eight hours?" I asked Mr. Burke, Chief Inspector of Factories of Ontario, to express his opinion as to hours of work. He said: "Much depends on the character of the work." For instance, he did not consider dictation very hard work, and yet he could not dictate for more than three hours at a stretch. If he tried to continue longer, his head soon got full of bumble bees, and then he had to stop. As to factory work, it was generally understood that sixty hours a week should be the maximum, especially for children, youths or young girls. Exceptions are made in the fruit seasons, when longer hours are allowed under special permits from inspectors.

For nearly three years the most important work in the world has been the manufacture of munitions. Mr. Flavelle gave us some interesting information when he told us, about the middle of April, that the value of orders received by the Canadian Munitions Board, up to that time, was $850,000,000. Nearly 300,000 were engaged in the work, and 630 munition factories, including chemical and loading plants, were in operation in Canada. Mrs. Fred Fenton told me there were, in Toronto alone, 70 factories, including 32 in which large numbers of women were employed.

The British Government, wishing to increase the output of munitions, asked the men in factories to work overtime, and

*Read at meeting of Ontario Health Officers' Association, Toronto, May 29, 1917.

also seven days a week. The response was considered satisfactory. A large proportion endeavored to work overtime, both week-days and Sundays. In connection therewith many observations have been made, and numerous questions have arisen which are a great interest to the profession, and especially Medical Officers of Health. Two things were soon discovered: first, the men could not stand the strain for long; second, the increase in output came far short of what was expected. It was generally conceded that the workmen were doing their best, impelled by a loyal desire to help our country in its time of peril. The disappointing results caused surprise amounting almost to consternation. Immediate study and investigation were almost universally demanded, but especially by employers and workers.

A large number of women soon commenced to do what had been men's work. It was wondered how much they could do. We know now they can do a great deal. It is stated by many careful observers that in skilled labor, requiring application, accuracy, patience and manual dexterity, with only a limited amount of physical strength, women are superior to men. The entrance of women into this great arena of labor made investigation still more desirable.

The British Government acted promptly, and appointed "The Committee of the Health of Munitions Workers" to examine, investigate and report. After looking over the field it was deemed advisable to study industrial fatigue carefully and thoroughly. On the recommendation of the committee the question was studied in all parts of the United Kingdom by practical and scientific men. Among these is Stanley Kent, M.A., D.Sc., Professor of Physiology in the University of Bristol, who, with the help of his demonstrator, Mr. M. P. Phillips, B.Sc., and his research assistant, has been for more than two years investigating industrial fatigue by physiological methods, in factories, for periods of one and one-half to three and one-half months in each factory. Two of his reports to Sir Arthur Whitelegge, M.D., K.C.B., Chief Inspector of Factories, one in August, 1915, and the second in August, 1916, gave full details of the results of his examination of the workmen, to ascertain the amount of fatigue at different stages of the shifts, and his conclusions drawn therefrom. From the reports of many investigators, including Professor Kent, a few fragments may be detached.

During active work, waste products are formed, and, if

sufficient rest follows the work, these wastes are removed, that is, "the body automatically cleanses itself," but if there is not sufficient rest the wastes are retained and poison the system.

There is more sickness among workers on ten and twelve hour shifts than among those on eight hour shifts.

When fatigue accumulates from overtime work "balancing," which tends to lessen fatigue by diminishing application, occurs, that is, workers when tired cannot work effectually.

Overtime work is physiologically and economically extravagant, because the fatigue induced causes an unsatisfactory output.

The worker employed eight or ten hours a day may produce a greater output than another of equal capacity working twelve hours.

The following interesting fact is an example:—

A certain group of workers increased their average rate of output from 262 to 276 as a result of shortening the day from twelve hours to ten, and to 316 on a further shortening to eight hours.

After getting some knowledge regarding the munitions workers in Great Britain, it seemed fitting to learn something about our workers in Ontario. In studying the subject I have received much assistance from Mrs. Fred Fenton, who has done much in the way of inducing women to go into munition working in Toronto and many other cities and towns in Ontario.

The methods are much alike in the various factories, and some details from one will suffice to a considerable extent for all.

Our first factory was that of the Russell Car Company where Mr. Burt took us in charge. One gets a good impression at once. There is plenty of room, good light, good ventilation, and cleanliness everywhere. There are altogether in the factory about one thousand men and two thousand women, that is, nearly 700 of the latter in each shift. Our attention here and in other factories was directed chiefly to the women. The work is practically new to them, and their capacity for work of this sort, which certainly looks strenuous, can be measured with considerable accuracy. They work in eight-hour shifts, in each of which one half hour is allowed for rest and refreshment. The working time for each is therefore seven and one-half hours a day, or altogether for the three shifts twenty-two and one-half hours a day.

In one unaccustomed to such things, the sight of 700 women engaged in this work is apt to beget thrills, amazement, and admiration. First, these women are good to look at, brave, honest, intelligent and alert. Their work in that maze of complicated, rattling, shrieking machinery, carried on with the patience of the busy bee, the skill of the expert tennis player, the determination of the rugby footballer, was fascinating to a degree far beyond my powers of description.

It gives me much pleasure to state that the employers show every disposition to look after the comforts of the employees. To prevent injury by lifting heavy weights, the women are not allowed even to bend over to lift anything from the floor. Men do all the lifting. Sanitary conditions are excellent. There is a hospital with a dispensary and one ward; nine skilled nurses are employed, three for each shift. These give first aid, which is usually all that is required. In case of serious injury or illness the worker is put on a bed in the ward, and an ambulance is at once called to remove her to her home or a hospital. The majority are on "piece work." These women are really all skilled workers and get good pay—about three to five dollars a day. A certain number, however, acting as inspectors, who by measurements and other tests decide that the things turned out are exactly right, are paid so much an hour. Mr. Burt told us that for some time they worked ten-hour shifts, and now the output with a shorter shift was equal to that of ten hours. One worker said she commenced to get tired in about six and one-half hours, and it was rather hard to "keep going" the remaining hour and a half, but with sixteen hours for rest and sleep, the fatigue has entirely disappeared before the next shift.

At the Fairbanks-Morse factory Mr. Fletcher took charge of us. We found conditions and methods generally similar to those in the Russell, but the shifts for women are six instead of eight hours, and they work continuously for seven days a week, that is with the four shifts working as nearly as possible twenty-four hours a day. As a rule they do not suffer from fatigue at any time. We saw several coming and going, and the latter looked as well as the former.

At the Wilson factory we found women making bullets. The shifts had been eight and ten hours, but they were changing to eight and nine. Two things, however, were pointed out: the work is light as compared to shell work, and the workers were sitting in comfortable chairs during the whole shift.

At the shell factory on Pape Avenue, Mr. Banfield pointed out a girl who was putting the copper bands on the shells, and told us she could do more during the shift than any other woman or man in the factory.

At the Acetone factory (G. and W. Distillery), where there are about 66 men and 36 women, they show a kindly consideration for the latter.

Of these twelve come and twelve go off at midnight. As the neighborhood has a rather bad reputation its was not considered fitting that these young women should come and go at midnight, and automobiles are provided to collect those coming and bring them to the factory, and then carry those going to their homes.

Many think that this war, largely through the manufacture of munitions, has brought employers and workers closer together, and that the relationship existing between them will be more satisfactory in the future than it has been in the past.

Munition work can be carefully measured and we learn at the end of the day or week exactly what each worker is doing. Shell work is exacting, and requires continuous application of mind and muscle for a time, but there is a limit to the time. Most of the employers in the Toronto factories now recognize that fact, and have been reducing the number of hours. Three shifts of eight hours each appears to be a very satisfactory arrangement. Four shifts of six hours each appears also to produce good results, with the greatest possible output, and practically no fatigue.

We had an interesting example of the benefit of shortening the hours of labor in Hamilton. The "Steel Company of Canada" in that city makes shell forgings. The work is heavy, and rendered more arduous through the heat in the workshops. The workers are paid by the hour. The managers have for a time allowed the men an absolute rest of an hour or two in each shift, paying for the resting hours the same as for the working hours.

This has resulted in a considerable increase in the output.

Of course there are various sorts of work. For instance, driving cows to pasture or feeding cattle on a farm is vastly different from making shells or any other kind of factory work. It is very interesting to learn that in the occupation of making shells, a worker can accomplish as much in eight as in twelve hours. We have been told this before but have not believed it. The majority of employers have believed that such a statement

is absurd. "I have been an employer for thirty years," says one, "and I know what I am talking about. Don't come to me with your new-fangled notions, and your physiology. The best working hours are from 7 to 12 noon, and 1 to 6 p.m."

There is an interesting munitions factory in Milton, where women work on ten-hour shifts. They have been lifting thirty-five-pound shells. The mechanical devices for lifting heavy shells have not been introduced into this factory. They are mostly young, from seventeen to twenty-three years. One of the best workers is seventeen years old. They are below the average in size, weighing probably 110 to 125 pounds. Do they look healthy or unhealthy? In reply we say they look well and fit, and Halton County ought to be proud of them. But please go to the Russell factory and watch the women at work and talk to Mr. Burt. He will tell you the output has not been diminished by lessening the hours of work. The manager at Milton says our young women are strong, well and contented. Why change? We answer as physicians, who, having studied the question somewhat carefully, can state positively, women who work ten hours a day are not as healthy as those who work only eight hours. A period of sixteen hours for recreation, rest and sleep is much better than one of fourteen hours. It has been demonstrated they have a better recovery from fatigue after the longer rest. Try the short shifts and you may soon discover even without the physiology that this statement is correct. Your bright clever girl of seventeen may break down in less than a year under the longer working time. Unfortunately her nervous system will be exhausted perhaps some weeks before her muscles are tired out. After a time the collapse comes suddenly without warning. She will not die soon, but she will never completely recover. Why expose this healthy, happy girl to such a peril, if she can do as much for you in eight hours as in ten?

The facts revealed during the last two years have appealed to many employers who fully appreciate what the British Commission said about that "state of reduced efficiency, of lowered health, which might have been avoided without reduction of the output," and have acted accordingly. We desire to reach those employers who are reasonable and willing to learn something they do not understand yet; and finally we want to *get at* that boss without heart or soul who will treat his employees kindly and decently when he finds "it pays"—not before.

PRESIDENTIAL ADDRESS—THE ESTABLISHED VALUE OF RADIUM AS A THERAPEUTIC AGENT *

By Dr. W. H. B. Aikins, Toronto.

During the last decade considerable advances have been made in the study of the therapeutics of radium, and the use of the rays has been extended with varying success to a great variety of conditions, some belonging to the domain of surgery, and others to the province of internal medicine. These conditions include benign and malignant neoplasms in different parts of the body. The influence of radio-activity on the blood has also been found useful in the treatment of certain constitutional diseases. Additions are constantly being made to the already long list of conditions in which radium is proving itself a benefactor to humanity.

An accurate estimate of the value of any physical therapeutic agent is usually not arrived at until some considerable time has elapsed since its first introduction, and radium has been no exception to this general rule. During the first few years its advocates met with a considerable amount of opposition, and their claims were received with scepticism by the more conservative members of the medical profession. This conservative attitude in regard to new remedies obviously has its drawbacks, but it undoubtedly has the corresponding advantage that it tends to check their indiscriminate use at a time when they are still more or less in the experimental stage. At the present time, however, although a certain amount of scepticism in regard to the efficacy of radium treatment still persists in some quarters, it is gradually disappearing in view of the brilliant results which it has achieved in many cases, notably in cancer of the skin, fibroid growths of the uterus, hæmorrhage of the uterus and as a palliative in inoperable cancer, and it is now generally agreed that in radium we possess a valuable adjunct to our therapeutic armory.

Several factors have contributed to bring radium treatment into disrepute, and to give the impression that the claims made for it by its advocates are not justified by facts. Failures,

*Read at the second annual meeting of the American Radium Society, New York, June 4th, 1917.

more especially in the early period, have often been due to the inferior quality of the preparations used, or to the fact that radium was not available in sufficient quantity. No one will deny that under certain circumstances radium has a harmful, rather than a beneficial effect, and if given in too small doses it may stimulate the growth of cancer instead of retarding it. On the other hand, the destructive action of too large doses may result in an irreparable damage to normal structures, and has been known to cause death. That failure may be due to insufficient dosage is evidenced by the fact that many cases unsuccessfully treated by small doses of radium subsequently respond satisfactorily to larger doses.

In view of the importance of accurate dosage and technique it is clear that, in order to obtain good results special training and prolonged experience are absolutely essential—a fact which too many people are prone to forget—and that in the hands of those who have not had an opportunity of acquiring such experience the treatment may be dangerous. In not a few cases disastrous results, which tend to discredit radium treatment, are not to be ascribed to it, but to the inexperience of the operator.

In estimating the value of radium treatment it should be borne in mind that its advocates do not claim that it supersedes surgery, but that it is a valuable adjunct to surgery in helping to prevent recurrence after operation, in rendering inoperable cases operable, and that it has proved itself to be one of the best palliatives we have in cases in which operation is impracticable, and in many of such cases has brought about apparent cure. This being so, it is obvious that in a large proportion of cases radium is used as a last resource, sometimes when the patients are in an almost moribund condition, and when all other measures have failed to give relief. This should therefore be taken into consideration in estimating the results. In such instances, even if we succeed only in alleviating the distressing symptoms and giving the patient a certain amount of comfort, the treatment will have justified itself, and radium wil have accomplished what nothing else is capable of doing. The reputation of radium has too often suffered in the past, both at the hands of its friends and its enemies, exaggerated claims as to its efficacy being on the one hand based upon brilliant results in one or two apparently hopeless cases, whilst on the other hand it has been condemned altogether for isolated failures.

Character of the Rays. Amongst the important factors which influence the treatment are the character of the rays, the method and degree of filtration, and the density of the tissue. Dr. Viol will take up this important branch.

Analgesic Properties of Radium. Radium possesses valuable analgesic properties. It relieves irritation of the skin, and is especially indicated in pruritus ani and other localized forms of pruritus. The analgesic effect persists for some considerable time, and has been found most useful in neuritis, neuralgia, and in the relief of symptoms in inoperable and hopeless cancer.

Selective Action of the Rays upon Cancer Cells. In regard to the selective action of the rays upon cancer cells, Dr. Schmitz,[1] of Chicago, who has given a clear description of the histological findings, is to deal with this subject.

Dr James Ewing,[2] of New York, has also enriched the literature regarding the histological changes which are to be observed under radium treatment.

Dr. Ransohoff[3] points out that the changes invariably include obliteration of the blood vessels, which is an important factor in the cure of uterine fibroids by radium. He also quotes Keetman and Harting, who have shown that radium is dependent for its action "on the denser substances in the nuclei of the cells." Ransohoff says that this indicates that "the more closely the tissue approaches the embryonal type, the more amenable it will be to radium treatment," which accounts for the excellent results obtained in lymphosarcoma, and the comparatively poor ones in periosteal sarcoma and chondrosarcoma.

Morson[4] finds that in a considerable number of cases of cancer, absence of cancer cells can be demonstrated fourteen days after beginning radium treatment, but that in more resistant cases the malignant cells may show only slight alteration at the end of two months. Burnham[5] in dealing with the apparently selective influence of radium on cancer cells, concludes that the radium rays have a "deleterious effect on all living tissue," but that while, when weakened by the action of radium, the diseased tissues disappear because they are unable to resist the normal protective forces of the body, the normal ones, when exposed to similar influences, persist, because these protective forces are constructed with the object of helping and protecting them.

Constructive Effect of Radium. In addition to its destructive and selective action in regard to cancer cells, radium has a constructive effect, both on the tissues and on the system generally. Wickham and Degrais [6] found that while the cancer cells undergo primary hypertrophy, and subsequently soften, disintegrate, and are probably ultimately eliminated by phagocytes, radium has a stimulating effect upon the connective tissue surrounding them, which is invaded by embryonic nuclei which separate and finally replace the groups of cancer cells.

Cancer of the Skin. As Dr. F. E. Simpson, of Chicago, is taking up the subject of Radium in Dermatology, I will but briefly refer to some points which might reasonably come under the caption of his address. Observers everywhere are now agreed that radium is the ideal method of treatment in cutaneous cancer, both from the point of view of its selective destructive action on the cancer cells and its cosmetic results. In many instances it is preferable to surgery. This applies especially to epitheliomata of the face, in which operation may entail considerable disfigurement and mutilation. The results in some of the cases reported have been simply marvelous, and cases in every stage of the disease, even the most advanced, have yielded to radium treatment, sometimes proving refractory to all other methods.

An experience of several hundred cases has convinced me that no other agent can compare with radium for the treatment of these lesions. Small rodent ulcers respond magically, whilst more extensive cases, which are of several years' duration, and have resisted all sorts of therapeutic measures, including the x-rays, excision, and various kinds of physical treatment, have also been favorably influenced by radium. Dr. Frank Simpson reports over two hundred cases, which were all, with very few exceptions, cured by radium. He is of the opinion that the general rule that operable cases should be operated upon is not applicable to epithelioma of the skin, especially of the rodent ulcer type, in which radium is superior to surgery.

Dr. Russell Boggs [7] refers to the high degree of malignancy often associated with epithelioma of the lower lip, the almost invariable involvement of the lymphatic glands, and the frequency of recurrence after operation. He emphasizes the importance of treatment of the lymphatics, in view of the frequency of their involvement. Abbé [8] has successfully treated many cases.

All writers on the subject are agreed in emphasizing the importance of prophylactic treatment of pre-cancerous lesions, such as chronic abrasions and fissures of the lip, keratosis of the skin and leucoplakia of the tongue. Abbé and Delavan [9] point out that before the advent of radium there was no known cure for leucoplakia of the tongue, which is now generally assumed to be a pre-cancerous lesion. They find that both leucoplakia of the tongue and keratosis of the skin readily respond to radium.

In addition to the treatment of pre-cancerous lesions, it is advisable to give prophylactic doses of radium at intervals after apparent cure of epithelioma, and to keep all cases under observation for a long period, with the object of detecting recurrences at an early stage.

Radium in Metastasis. Dr. Lee [10] does not agree with the statement of the Harvard Cancer Commission that metastatic cancer should never be treated by radium. He reports three cases: One of epithelioma of the wrist, with extensive metastatic deposits on the upper lip and adjacent region. Treatment resulted in healing of the lip, disappearance of the primary lesion of the wrist, and great improvement in the general condition. In a case of epithelioma of the bridge of the nose with metastasis in the neck, there was great improvement, and in one of epithelioma of the lower lip with metastasis in the cervical glands and sternum the patient was regarded as clinically cured.

Cancer of the Mucous Membrane. Epithelioma of the mucous membrane, such as those of the mouth, pharynx and larynx, is frequently associated with lymphatic involvement, and is much more difficult to influence by radium than that affecting the skin.

Parotid Tumors. At a meeting of the American Association for Cancer Research at St. Louis in April, 1916, Dr. Richard Weil [11] reported a case of very extensive tumor of the parotid, involving the whole of the lower part of the right ear and of the neck behind the ear. It was shown microscopically to be an adenoid cystic epithelioma. Six weeks after treatment it had practically disappeared, and a year later there was no recurrence.

Tumors of the Brain. Dr. Frazier [12] reports six cases of malignant tumors of the cerebellum, which he referred to Dr. Sawyer for radium treatment. Two died, one from fibro-sarcoma, the other from meningitis, and four are still living. In

one of these cases, a deeply seated cerebellar tumor, the patient, a child of ten, shows some general improvement, but there is still marked cerebellar disturbance. A boy of fifteen, with tumor of the right cerebellar pontine angle, is now able to follow his former occupation, and is quite well, with the exception of blindness due to optic atrophy. A woman of thirty-five who was treated with radium seven months ago, is now able to walk by herself, and has gained in weight and strength. All the tumors were inoperable.

Carcinoma of the Breast. Practically all writers are agreed that surgery is the treatment of election in operable cases, but prophylactic treatment by radium after operation is of great service in helping to prevent recurrence. In inoperable cases, or in those in which there are contra-indications to operation, radium will at least give considerable relief.

The "cross-fire" method of applying it increases its efficiency and intensity. Dr. R. T. Morris [13] has had a varied experience with radium in cancer of the breast. In some of his cases recurrent carcinoma was uninfluenced by radium; in others the course of the disease was arrested, and a few are regarded as cured, some of them having remained without recurrence for seven or eight years.

Cancer of the Bladder and Prostate. Up to the present comparatively few cases have been recorded in which radium has been used in the treatment of carcinoma of these regions. Pasteau and Degrais [14] report some interesting cases in the successful treatment of cancer of the prostate. Schoenberger and Schapira [15] report two cases of carcinoma of the bladder, in which the character of the growth was confirmed by microscopical examination of the pieces removed. In both cases a tube of radium was introduced into the bladder after suprapubic cystotomy, remaining in place for twelve hours.

In the first case the tube, after removal from the bladder, was buried in a large metastatic growth in the right inguinal region. Two months later the bladder tumor had entirely disappeared and metastatic growth considerably diminished in size, but the patient subsequently died from pelvic metastasis. In the second case there was extensive carcinoma of the bladder and prostate. Three months later the mucosa of the bladder was apparently normal, and the prostate much reduced in size and of normal consistency, the patient having gained twenty-six pounds in weight.

Dr. Winfield Ayres,[16] by using a very large cystoscope and

a high concentration of radium, was able to give the very large total dose of 795 millegramme hours of radium. Cure was obtained in an inoperable cancer of the bladder, and seven months later there was no sign of recurrence. Young,[17] of Baltimore, has described a highly specialized technique by means of which he has been able to treat cancer of the prostate and bladder with great accuracy and detail, but he will deal with this subject at the afternoon session.

Carcinoma of the Uterus. The uterus, chiefly on account of its accessibility, which allows of the radium being brought into direct contact with the growth, is very suitable for radium treatment. Ransohoff, who has had considerable experience in this class of case, refers to a patient who came under the observation of Rubens-Duval, suffering from inoperable cancer of the uterus. She died of intercurrent disease several years after undergoing the radium treatment, autopsy showing complete anatomical cure. Cheron and Duval[18] report a similar case. The patient died fifteen months after radium treatment had resulted in apparent cure, and histological examination did not reveal a single cancer cell in any part of the body.

Dr. J. G. Clark[19] reports forty-four inoperable cases of carcinoma of the uterus, vagina or urethra, treated by a dose of 85 to 100 milligrammes of radium. No deaths could be ascribed to the treatment, the results of which were in many cases so remarkable as to be almost incredible. Newcomet[20] states that his experience indicates the advisability of the more general use of radium in uterine carcinoma, more especially after operation. I merely mention the names of Drs. Clark and Newcomet as having done most excellent work, and they will deal with the subject of Radium in Gynæcology.

As regards persistence in cure in malignancy after radium, in 1911 Wichmann[21] reported thirty cases, many of which had remained without recurrence for four years; Jungmann[22] one of the ala nasi which has remained without recurrence for two and a half years. Haslund[23] one which also has remained without recurrence for a like period. Dr. Benham Snow[24] states that in his experience radium has been uniformly successful in these cases.

Lymphosarcoma. Kelly and Burnam report a series of twenty rapidly recurrent cases of lymphosarcoma of the neck, of which thirteen to sixty-five per cent. were apparently cured. The total dose of radium varied from 441 to 2,000 milligrammes, distributed over several hours repeated at in-

tervals of weeks or months, the entire lymphatic system of the neck being irradiated in the more advanced cases. They conclude that in this class of case radium should invariably be substituted for surgery, and that if the treatment could always be undertaken in the early stage the proportion of recoveries might very possibly rise to ninety per cent.

Tumors of the Bone. Bissell[25] reports two cases of sarcoma of the bone, one of which, affecting the femur, apparently completely recovered. Before treatment the x-ray picture showed a typical sarcoma, whilst the last taken resembled that of chronic periostitis.

Radium in Non-Malignant Conditions. Many non-malignant conditions have responded well to radium, including uterine fibroids, nævi, warts, papillomata, keloids, tuberculosis of the skin, eczema, psoriasis, cervical adenitis, and various kinds of uterine hæmorrhage.

Radium in X-Ray Burns of the Skin. Abbé has reported several cases of epithelioma of the skin, due to x-ray burns, which were cured by radium. One of these, affecting the back of the hand, was cured by one application only, as long ago as 1903, and has remained without recurrence ever since. In a very extensive and long-standing case, in a maker of x-ray tubes, the growths on the hands fell off in thirty days, leaving a smooth soft scar. There was no recurrence of the epitheliomata, but the patient subsequently died of general carcinomatosis. Abbé states that he has not had a single case in an early stage which has not yielded to radium. He uses the same dose as for ordinary papillomata or basal-celled epitheliomata.

Sinclair Tousey[26] has treated about fifteen cases, and also his own hands, from which all traces of growth had disappeared ten weeks after the first application of radium, although they had been very severely affected.

Radium in Synovial Lesions. Dr. Richard Sutton,[27] of Kansas City, reports two cases, both in women, one affecting the distal phalanx of the right index finger, and the other the metacarpo-phalangeal joint of the index finger. In the first case the lesion became much smaller, and pain disappeared under radium, but it seems unlikely that the relief will be permanent. In the second case the lesion has entirely disappeared for five months, with the exception of a small central cicatrix.

Fibroids of the Uterus. Abbé of New York was the first to use radium treatment in a case of fibroid of the uterus, which

came under his observation in 1905. Cure resulted, and the patient has remained without recurrence for twelve years. The obliteration of the blood vessels, which follows the use of radium, has been found most useful in the treatment of this and other conditions causing uterine hæmorrhage. Abbé, who has treated a large number of uterine fibroids, says that he is continually gaining more confidence in the use of larger doses and less frequent applications of radium.

Wickham, Degrais and Cheron also report satisfactory results. Of 120 cases, Cheron states that the menopause was brought on in 117, and the size of the tumor markedly reduced in 108. Dr. Kelly, is of opinion that in fibroid of the uturus operation is indicated only in the case of urgent pressure symptoms or complications, such as lateral inflammation or ovarian cysts, and that in all other cases radium alone should be used. From his experience he concludes that in practically every case radium will stop menstruation, reduce the tumor in size, and sometimes cause its complete disappearance. Abbé also concludes that its action in uterine fibroids is the most extraordinary of all the remarkable effects of radium. He regards radium as the method of election in all but pedunculated fibroids.

Radium has also been very successful in other varieties of uterine hæmorrhage, chronic endometritis and cervicitis.

Nævus. In certain types of nævi and birth-marks destructive doses of radium gives results superior to those from any other method of treatment, the scar being soft and flexible, and the skin ultimately becoming quite normal. The painlessness of the applications is a great advantage.

Keloid. Abbé has had brilliant results from both true and false keloid, and his experience confirms the statement of Wickham that both are equally easy to cure. Inoperable keloids are removed by inducing in the first place a severe inflammatory reaction, the mass atrophying on subsidence of the inflammation, leaving a thin flexible cicatrix.

Vernal Catarrh. Abbé cured ten cases of vernal catarrh, which had previously been unsuccessfully treated by the removal of hypertrophied masses, cauterization and caustics, by a fifteen minute application of a tube of strong radium under the eyelid, the tube being moved backwards and forwards, with a lead screen for the protection of the cornea. They had all been recurrent for many years, and have now remained cured for periods up to ten years. Tousey has also had good results in vernal catarrh.

Lymphoid Tumors. Delavan reports cure by radium of lymphoid tumors of the tongue, myeloid tumors of the jaw, laryngeal tumor and naso-pharyngeal fibromata. Bissell has had satisfactory results in inflammatory conditions, infections after trauma, etc., and in a case of streptococcal infection of the metatarsus after compound fracture of the second phalanx of the second toe, all evidence of infection had subsided a week after commencing treatment.

Exophthalmic Goitre. Abbé first used radium successfully in exophthalmic goitre, and his favorable experience of its results has been confirmed by other writers. The experiments of Sir Victor Horsley[28] and Finzi[29] show that the most constant changes after radium affect the blood vessels. In refractory cases of exophthalmic goitre I have found the treatment to be of decided benefit, and my clinical experience shows that, when applied over the thyroid, the most penetrating rays of radium diminish the vascularity and reduce the secretion of the gland. I have recently reported seven successful cases, in which the application of radium was followed by relief of the symptoms and reduction in size of the thyroid.

Lupus Vulgaris and Lupus Erythematosus. I have had good results from radium treatment in several cases of lupus vulgaris and other forms of tuberculosis of the skin. In these conditions, in view of the possibility of the existence of general systemic disease, it is important to keep the cases under observation for some considerable time, in order that relapses, if they occur, may be dealt with in an early stage. Cases of lupus erythematosus have been most favorably influenced by the proper use of radium rays.

Tuberculous Sinuses. It is well recognized that considerable difficulty is frequently encountered in obtaining healing of sinuses persisting after removal of tuberculous cervical glands. In several cases radium treatment, carried out by the insertion of a powerful tube of radium directly into the sinus, has been most successful in bringing about destruction of the diseased tissue, and in stimulating development of healthy granulations, ultimately resulting in obliteration of the disease focus.

Tuberculous and other Diseased Glands. Radium has been used with varying success in malignant, non-malignant and tuberculous disease of the glands. Sarcomatous and lymphadenomatous glands respond much more rapidly than car-

cinomatous glands, which should, if possible, be surgically removed, as they rarely disappear or become quiescent under treatment. Inflammatory enlargement of glands promptly responds to radium.

Radium either alone or as an adjunct to vaccine treatment is often of considerable value in the treatment of tuberculous glands. It is advisable to give heavily screened exposures of 30 or more hours' duration, endeavoring if possible to give "cross-fire" radiation. If the glands are caseating radium is of little use. In view of the frequency of involvement of the thoracic glands in these cases, it is advisable to include them in the irradiation.

In some cases enlargement of the glands is due to mixed infection, and under such circumstances the response to treatment may be irregular, some subsiding promptly, others slowly.

Radium in Military Surgery. The stimulating and decongestive action of radium on the tissues has been shown by Barcat and Dominici, and in 1910 Chevrier showed that it accelerated the cicatrization of wounds. Wickham and others have shown that it diminishes the virulence of bacteria and their products. These characteristics of radium, together with its analgesic properties and beneficial effect in the restoration of motor function, have already proved of great value in the present war. The idea that the stimulating properties of radium might be of service in the treatment of infected wounds, deep sinuses, etc., arose from the observation of the stimulating effects of inadequate doses, and was first acted upon by Dr. Bissell, of New York, who obtained very satisfactory results in cases which had proved resistant to surgery.

Drs. Cameron and Almquest[30] treated over 100 cases in military hospitals in England, and their experience indicates that whilst radium is not capable of preventing infection, it assists nature to resist it when present. In acute cases, in which defensive forces are active, they do not use radium unless there are indications that stimulation is required, and they add 50 micrograms of a soluble radium salt to normal saline solution, and use it as a continuous douche. They reserve tubes for sub-acute or chronic cases, and give in cases of severe shock, intravenous injections of 50 to 100 micrograms in 2cc. of normal saline solution. They give details of 47 cases and are of opinion that radium increases the activity of the leucocytes, and is the most economical method of treating obstinate wounds which refuse to heal.

This brief and incomplete summary of the work which has been done during the last few years sufficiently indicates the extraordinary development which has taken place in the radiotherapy, a development which has been rendered possible by improvements in technique and our knowledge of the character of the rays, and which justifies us in the anticipation of continued progress in this direction in the future. Even in desperate and particularly moribund cases, which are hopeless from the point of view of cure, radium has in many instances added greatly to the comfort of the patient, and has proved itself one of the best palliative measures we possess.

As remarked by Kaye:[31] The story of radium and its discovery is tinged with the spirit of romance. It is a story unequalled in the world's history as radium stands unequalled at present among the world's metals. Looking back, from the laboratory of Prof. Curie, down to a long vista of years one can trace the gradual evolution of a scientific certainty out of the half-formed and crude beliefs of the Middle Ages.

Bibliography.

1. Schmitz, *Journ. Amer. Med. Assoc.*, 1915, LXV. 1879; 1916, LXVII, 1222; *Med. Record*, 1916, XC. 100; *Interstate Med. Journ.*, Dec., 1916, 1904; *Radium*, July, 1916; 97; Oct., 1916, 1.

2. Ewing, *Medical Record*, LXVIII.

3. Ransohoff, *Annals of Surg.*, 1916, LXIV. 298; *Radium*, Feb., 1916, 111.

4. Morson, *Proceedings Royal Society of Medicine*, 1914, Pathol. Sec.

5. Burnham and Kelly, *Johns Hopkins Hospital Bulletin*, 1915, XCV. 190; *Journal American Medical Association*, 1915, LXV. 1874; *Maryland Medical Journal*, 1915 (July); *Radium*, September, 1915, 113; *Transac. Amer. Gyn. Sec.*, 1916; *American Journal*, 1916. XXX. 73; *American Journal Obstetrics*, August, 1916, 326.

6. Wickham and Degrais, "Radium Therapy."

7. Boggs (Russell), *Journal American Medical Association*, 1915, LXV. 1669; 1916 LXVII. 49; *Radium*, May, 1916, 33; November, 1916, 39.

8. Abbé, *Medical Record*, February 27, 1915, 379 and 754; *Journal American Medical Association*, 1915, LXV. 220.

9. Delevan (Bryson), *New York Medical Journal,* 1916, CIV. 970.

10. Lee, *Radium,* July, 1915, 75.

11. Weil, *Journal American Medical Association,* 1915, LXV. 2138.

12. Frazier, *Radium,* August, 1916, 123.

13. Morris (R. T.), *New York Medical Journal,* 1916, C.I.V. 43.

14. Pasteau and Degrais, *Canadian Practitioner,* December, 1913.

15. Schoenberger and Schapira, *Journal American Medical Association,* 1914, LXIII. 1852.

16. Ayers (Winfield), *New York Medical Journal,* 1915, 101, 345.

17. Young, *Journal American Medical Association,* 1917, Vol. 68, XVI. 1174.

18. Cheron and Duval, Cited by Ransohoff.

19. Clarke (J. G.), *Annals of Surgery,* November, 1916, 602; *Journal American Medical Association,* 1916, LXVII. 38, 390; *New York Medical Journal,* 1916, CIV. 1014; *American Journal of Obstetrics,* August, 1916, 324.

20. Newcomet, *New York Medical Journal,* July, 1915; *Journal American Medical Association,* 1916, LXVII. 1392.

21. Wichmann, *Radium in der Heilkunde,* 1911. Strahlen-therapie, 1912, 483.

22. Jungmann, *Gesellschaft d. Aerzte. in Wien,* June 27, 1915.

23. Haslund, *Brit. Journ. Dermat.,* October - December, 1916, 294.

24. Benham Snow, *American Journal Electro-Therapeutics,* 1916, 46.

25. Bissell (J. B.), *Medical Record,* May, 1915, 754; June, 1915, 1023; *American Medicine,* July, 1916, 520; *New York Medical Journal,* 1916, CIV. 3.

26. Tousey (Sinclair), *Journal American Medical Association,* 1915, LXIV. 1394; *New York Medical Journal,* 1916, CIV. 56.

27. Sutton (R.), *Journal American Medical Association,* 1916, LXVI. 565.

28. Horsley (V.), Cited by Dawson Turner; Report Edinburgh Radium Institute.

29. Finzi, *Practitioner,* 1916, XCVI. 191.

30. Cameron and Almquest, *Radium,* May, 1916, 45; December, 1916, 54.

31. Kaye, *Science Progress,* No. 41.

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Editorials

THE ONTARIO HOSPITAL IN ENGLAND

Over 6,000 patients have been treated in the Ontario Hospital at Orpington, Kent County. In the Hospital, as first built under the supervision of Dr. Pyne, there were 20 wards each having 52 beds, also an isolation ward with 40 beds—total 1,080. There were on an average 600 to 800 patients in the wards. By recent additions the capacity has been nearly doubled, and there are now 2,120 beds. There are 80 trained nurses from Ontario. These rank as lieutenants except in the case of the matron, Miss Smith, of Ottawa, who ranks as captain. The nurses have very neat navy blue uniforms. In addition to the regular staff of officers, surgeons and dentists there are 310 others including non-commissioned officers, orderlies, dispensers, engineers, firemen, dressers, motor drivers and police. There are also 9 V.A.D., containing 500 beds near the main hospital, available for the less serious cases, and 12 motor ambulances to take the men from the station to the main hospital, or the auxiliary establishments. It will thus be seen that in the main hospital and the auxiliary establishments combined there are 2,620 beds. Lieut.-Col. D. W. Macpherson, who was away for some months, has returned to the hospital and is again its O.C.

WAR-TIME PROHIBITION

A strong Committee with Professor Fisher, of Yale University, President; Charles W. Eliot; President Emeritus Howard; Bishop Lawrence,

of Boston; Slocum of Colorado, Vice-Presidents, and about 50 other prominent men from all parts of the United States, have commenced work in a campaign for war-time prohibition during the war, and for war reasons. Some of its members are opposed to prohibition in times of peace, and most of them are new men in the field. A letter from the President tells us that such prohibition would save 11,000,000 loaves of bread a day.

There has been considerable agitation on similar lines in Great Britain. Most of the discussions in the United Kingdom have referred particularly to beer. It has been already decided that no barley will be malted except a small quantity for use as coloring matter. No barley has been malted for three months. The question is what shall be done with the malt now existing in the breweries; shall it be made into beer, or mixed with flour and made into bread? It happens unfortunately from the bread standpoint that no more than 5 per cent. should be mixed with flour for breadmaking, as a larger percentage produces a sticky and unpalatable loaf.

CANCER AND THE PUBLIC

We are indebted to Dr. Thomas Cullen, Baltimore, for the report of the Cancer Campaign Committee (of which he is chairman), appointed by the Clinical Congress of Surgeons of North America.

In the first place it was realized by the Committee that if satisfactory results were to be accomplished the message must be carried to the people.

The committee was instructed to write, or have written articles on cancer, and have these published

in the daily press and weekly or monthly magazines. It was thought a lay letter-writer could better reach the public ear, and they selected Mr. Samuel Hopkins Adams, who was such a dominant factor in the campaign against patent medicines. After visiting various surgical clinics, he wrote a comprehensive article on the subject which was first published in *The Ladies' Home Journal*, May, 1913. Other articles of his also appeared in *Collier's Weekly*, *McClure's Magazine*, *Harper's Weekly*, and a large number of newspapers in all parts of the United States and Canada. The great aim was to convince the public that sufferers from cancer should have the condition attended to promptly.

It is easier to teach women than men the importance of having any abnormality treated promptly. The committee presents the following facts: Cancer is a very common malady, in the beginning it is a strictly local process and not a blood disease. It is easily cured when removed early. It is incurable in its later stages.

ACADEMY OF MEDICINE

The Tenth Annual Meeting of the Toronto Academy of Medicine was held May 1st, 1917. The Chairman of the Board of Trustees, Dr. Herbert Hamilton, read the annual report. He gave some interesting particulars as to its organization ten years ago, and its rapid growth since that time. Between the years of 1887 and 1907 the Ontario Medical Library Association was in existence, but was far from prosperous. In 1907 the Academy was

organized by the union of four medical societies previously existing in the City.

The Academy began with a capital estimated at $10,000 (1907). Its assets now are about $51,000.

The prospects for this flourishing institution are very bright at the present time.

The following officers and members of Council were elected for the session 1917-18: President, Dr. D. J. Gibb Wishart; Vice-President, Dr. A. Primrose; Honorary Secretary, Dr. J. H. Elliott; Honorary Treasurer, Dr. J. H. McConnell; Past President, Dr. John Ferguson; Chairmen of Sections: Medicine, Dr. G. W. Ross; Surgery, Dr. W. A. Cerewell; Pathology, Dr. F. W. Rolph; State Medicine, Dr. Gordon Bates; Ophthalmology and Oto-Laryngology, Dr. F. C. Trebilcock; Pædiatrics, Dr. George E. Smith; Dr. A. H. Perfect, H. B. Anderson, F. N. G. Starr, J. G. Fitzgerald, Wm. Goldie, C. P. Lusk, W. A. Young, B. P. Watson.

OLD AGE

An interesting article on Senescence and Senility, written by Dr. Leonard Williams, appeared recently in *The Medical Press and Circular* of London, England. He considers the matter of age from a new standpoint because of the loss, through death in the war, of such a large proportion of men between 25 and 45—he thinks that in the future we shall have to regard a man as still youthful at 50.

He considers that a new problem now confronts us, and we have to consider, or we should consider, how best to prolong the period of efficient maturity.

The 15 years between 50 and 65 are, or ought to be, intellectually the best years of a man's life, but these are the years in which he is likely to go most wrong physically. If he can be successfully steered through the difficult narrows of this critical period he will reach the calmer waters of declared senility. Our most important task in connection with him is to assure and prolong the pre-senility period.

In a certain regard it is useless to give him much advice in regard to food, alcohol, tobacco, exercise, etc., because before he is 50 years old he has become so stereotyped in any physiological vices which he may have that he is not likely to change his habits. Dr. Williams says there is one particular on which it is necessary to dwell, and that is the importance of free alvine evacuation. This may seem as banal as the others but it is not. The majority of people are constipated, and the vast majority of these do not know that they are constipated.

THE ROYAL NAVY

At the outbreak of the war the medical personnel of the British Navy was at once extended by the mobilization of the retired Emergency and Volunteer Reserve Medical Officers, by the collection of a large number of temporary surgeons for the period of hostilities, and by the appointment of 10 surgeons, consultants (two being anæsthetists). Later the old-time Naval Medical Officer, the surgeon's mate was revived in the enrollment of advanced medical students as surgeon probationers. These were placed in torpedo-boat destroyers and other small

vessels, which otherwise have no medical officers so as to render First Aid, and the records of the Jutland Battle show this trust was fully justified.

Surgeon-General Sir Arthur May tells us in the *British Medical Journal* that the health of the Service Afloat has been excellent—better indeed than in times of peace. This is due to several factors: 1, To the efforts of preventive medicine and hygiene, especially improved ventilation of warships; 2, To the healthy isolation of the Grand Fleet, far from the temptation of seaports; 3, Precautions taken in drafting men from shore depots of the fleet as to quarantine, etc.; 4, Lectures by the medical officers on personal hygiene; 5, Keeping the men fit by exercise and combating the effects of monotony, and to maintain the high spirit of confidence in eventual success.

EDITORIAL NOTES

Stretcher Bearers.—We are told that the Red Cross stretcher bearers are doing magnificent work in the front line of battle. We are told that these non-combatants are not immune. The shells have an impersonal way of killing many of them. They have a valor of their own. They have none of the excitement of the actual fighting, and yet they go coolly about their duty with death ever near them, and no word or comment is ever needed to keep them at their tasks.

It is stated that fully 5,000 in France are now totally blind from wounds received in battle.

News Items

Word came from Ottawa, May 8th, that there were at that date 19,460 Canadian patients in the Hospitals of the United Kingdom.

It was decided by the Trustees of the Waterloo Hospital and other citizens of Kitchener, May 8th, to erect an addition to the Nurses' Home, which is at present overcrowded.

Miss Vera Robb, a graduate nurse, of Woodstock, age 25, was found dead in her room May 5th. It was supposed that death was caused by chloroform which she was inhaling for the relief of severe pain.

Nurse Edna Day from Sherbrooke, Que., a graduate and for some time Assistant Superintendent of the Sherbrooke General Hospital, was reported lost in a British transport, which was sunk near Malta.

The Minister of Militia, Sir Edward Kemp, stated in the House of Commons, May 9th, that Lieut.-Col. Marlow was offered an appointment overseas, March 27th, with the understanding that his duties would be assigned by the Overseas Military authorities on his arrival in England.

At a meeting of the Toronto Board of Health, Dr. Hastings, M.O.H., brought up the question of the advisability of encouraging the use of oleomargarine as a healthy, nutritious food. The Board expressed deep regret because the government had not repealed the legislation prohibiting the sale of oleomargarine.

It has been decided that the Military Hospitals Commission will build an Amusement Hall on the Ontario Government property in Whitby, in which will be provided entertainments for the convalescent soldiers.

We are told by the *C.M.A. Journal* that the announcement which appeared in several Medical Journals (copied from *The*

London Gazette) that Lieut.-Col. Geo. E. Armstrong, an eminent surgeon of Montreal, had relinquished his temporary commission in the C.A.M.C. is quite incorrect.

Arrangements have been made by the Hospitals Commission and the Grand Trunk Railway to provide special transportation facilities for relatives visiting returned soldiers undergoing treatment at the Military Convalescent Hospital, Whitby.

The following officers of the C.A.M.C. have received special mention for valuable services: Cols. L. Drum, Geo. Rennie, J. W. Brydges, and W. A. Scott. Lieut.-Cols. Brousseau, W. Buell, I. H. Cameron, G. Chambers, J. D. Courtenay, F. S. Finley, D. W. Macpherson, F. H. Mewburn, and W. L. Watt. Majors I. Baxter, F. Dell, R. Bowie, D. A. Clarke, C. Doherty, L. Irving, A. Macpherson, J. Meakins, Reason, Russel, S. Smith, T. Sharkie, R. Wilson, and C. Young. Captains Allen Bagnall, Barager, Bayley, Boutheillier, Bowman, Goodall, Hale, Lomas, McGaffin, W. J. Mackenzie, Morcereau, Neff, Orr, Thomas, Warner, Williams, Cawthra and Kirkpatrick.

Mr. McIntosh (to doctor who has had an urgent call in the middle of the night): "Aye, doctor, man, I'm sorry we ca'd ye on such a treevial job. Ye see, we thocht wee Wullie had swallowed a hauf-croon, but my wife has been coontin' up her cheenge, an' it turns oot tae be only a penny."

Crawford—Keep your wife supplied with a box of candy and perhaps she won't nag you.

Crabshaw—Candy wouldn't stop her. That woman can keep on talking with her mouth full of hairpins.

A morning paper announces that Mr. R. F. Gagen, the eminent artist, is painting a cod-fishing scene. May we genially inquire if he is doing it in codliver oils?

Personals

Major D. A. Clark, Toronto, is now A.D.M. at Bramshott.

Colonel Brydges is A.D.M. at Shorncliffe.

Dr. Edmund Spragge, of Toronto, went to Vancouver, May 10th.

Col. A. E. Ross, M.D., M.P.P., Kingston, is Director of Medical Services in France.

Lieut. S. H. Pepler, son of Dr. W. H. Pepler, Toronto, was wounded May 9th.

Dr. Forbes Godfrey and Hon. Howard Ferguson left New York May 4th on a cruise through the Carribean Sea.

Dr. Michael Clarke, M.P., visited Toronto, May 11th, and addressed a meeting of the Ontario Women's Liberal Association.

Dr. F. S. Minns, Toronto, went to Cincinnati, May 9th, to attend the annual meeting of the National Association for the Prevention of Tuberculosis.

Dr. J. D. Curtis, of St. Thomas (Capt. for a year in the R.A.M.C.), has been appointed Surgeon of the Ontario Workmen's Compensation Board.

Col. W. T. Connell, Professor of Ophthalmology and Sanitary Science in Queen's University, has been appointed C.O. to the New Military Hospital at Kingston.

Dr. Charles Hastings, Toronto, returned to his office May 12th, after a visit to Cincinnati and other cities of the United States. He was studying various methods of school inspection.

Senator (Dr.) Sproule, ex-Speaker of the House of Commons, became suddenly ill at his home in Markdale, May 12th. Dr. Angus Ego diagnosed Strangulated Hernia, and had him removed to the General Hospital, in Owen Sound, where Drs. Middlebro, Ego and Rutherford operated, May 13th. Although Dr. Sproule is in his 74th year, we understand that he rallied well, and at last accounts was supposed to be making a good recovery.

Obituary

JAMES RUTHERFORD, M.D.

Dr. J. Rutherford, of Orono, who practised in that village for many years died May 14th. He graduated from Queen's University in 1870.

JAMES ARTHUR ROSS, M.D.

Dr. J. A. Ross, of Barrie, died May 1st, after an illness of several months. He graduated M.D. from Victoria University in 1888, and about four years after he commenced practice in Barrie, and continued in active work there until the time of his last illness. Three brothers—doctors—survive, Dr. W. A. Ross, Barrie; Dr. Victor Ross, Hamilton, and Dr. Fred A. Ross (Capt.) is now in France with the B.A.M.C.

DR. JOHN L. DAVISON

An Appreciation by Dr. H. B. Anderson.

In the death of Dr. Davison the Medical profession of Canada has lost one of its most esteemed and distinguished members. After beginning practice, he soon became established as one of the best known and highly regarded physicians of the city, and his popularity, not alone with his patients, but with his medical confreres and the public at large, continued to increase until the time of his death. The reasons for his success are not difficult to appreciate. His handsome appearance, distinguished and dignified bearing, his direct, straightforward and honorable attitude toward all with whom he came in contact, his kindly and philosophical outlook on life, were all features of a unique personality which attracted and retained warm friendships. Highly endowed by nature, he had the further advantage of a thorough general and professional education, extended by travel and intercourse with people prominent in social, educational, political and business affairs.

He was an excellent clinical teacher and lecturer, the breadth and soundness of whose judgment made a deep im-

pression on his students. He was the ideal type of the cultured and skilful family physician, eminently fitted to be "friend, counsellor and guide" to his large and influential clientele. It must be rare indeed that one is rewarded with a deeper hold upon the confidence and affection of those to whom he ministers, or who seek advice in their troubles. His friends were legion, and included all ranks and classes of society—men and women, old and young, rich and poor—all came under the spell of his broad human sympathy, kindliness of heart and sparkling humor. For ten years he lived under the shadow of angina pectoris, which confined his activities within a steadily narrowing sphere, yet, without complaint, he adjusted himself to enforced limitations, which however never abated the joy of living. In fact, his last years he repeatedly said were the happiest of his life, his physical disability giving him more leisure for reading, reflection and for music, especially of the violin, at which he passed many pleasant hours with a small set of intimate friends.

He was an expert with rod and gun, and it was exhilarating to watch the boyish enthusiasm with which he prepared for his frequent outings to the Georgian Bay, where he revelled in the beauties of nature in the company of kindred spirits at the Tadenac Club. On hearing of his death, Dr. G. T. Elliott, of New York, one of his companions of the Tadenac, wrote as follows:

"It was a great shock; it was a terrible sorrow and a deep realization of irreparable loss I experienced and felt when the fact was brought in to me that our dear old friend, the sweetest-natured friend and companion ever, had been called away and had left us behind—yes, to follow him eventually—but still without his company. Alone has he gone from those he loved and who loved him, and it is with deep sadness I am writing you my feelings, knowing how you also were close and dear to him. What a pity he has gone, and how we will miss him—not for a day or a month—but for all the time that still remains to us, his cheeriness, his lovableness, his kindly smile and overbrimming milk of human kindness will be a cherished memory. May God bless him."

In accordance with his wishes and in keeping with his simple tastes, he was buried in the family plot in the pretty cemetery on the banks of the Sydenham River, near the village of Florence, where his boyhood days were spent, and whence a number of his old friends accompanied the remains to their last tribute of love and respect.

Book Reviews

Cataract, Senile, Traumatic and Congenital. By W. A. Fisher, M.D., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Chicago: Published by Chicago, Eye, Ear, Nose and Throat College.

Dr. Fisher, of Chicago, has given a very clear description of the technique and advantages of the intracapsular method of removing the crystallized lens. He is a very strong advocate of the intracapsular operation, and his statistics of ninety-four consecutive cases seem to bear out his contention that it is the operation to be advised in capable hands. So many oculists are unable to get skilled and trained assistants necessary that they are forced to adhere to the old method. He also speaks of the corneal trephine for glaucoma, where the condition cannot be reduced by medical treatment or an iridectomy.

Glaucoma, A Handbook for the General Practitioner. By Robert Henry Elliot, M.D., B.S., Lond.; Sc.D. Edin.; F.R.C.S., Eng.; etc.; Lieut.-Colonel I.M.S. (retired); late Superintendent of the Government Ophthalmic Hospital, Madras; late Professor of Ophthalmology, Medical College, Madras, and late Fellow of the University of Madras; Honorary Fellow of the American Academy of Ophthalmology and Oto-Laryngology. H. K. Lewis & Co., Ltd., 136 Gower Street, London, W.C.

The general practitioner is forced to pay more attention than ever before to diseases of the organs of special sense, more especially the eye and ear. There is, perhaps, no single disease of the eye which the physician so much fears as glaucoma.

Every oculist is brought into contact at some time or other with unfortunate cases of glaucoma which have been overlooked or wrongly diagnosed, hence wrongly treated. One needs only to see a single case of absolute and incurable blindness from such a cause to realize how important it is that this condition be recognized early.

We heartily recommend Colonel Elliot's handbook on Glaucoma to every physician, whether oculist or general practitioner. The subject is handled in a masterly manner, clearly and concisely and with no irrelevant matter, as is known to everyone. Colonel Elliot is the originator of the trephine operation, and while his sympathies naturally lead toward this operation for relief, in all cases he gives due prominence to other remedial agents.

Acute Appendicitis; Practical Points from a Twenty-five Years' Experience. By C. Hamilton Whitford, M.R.C.S., L.R.C.P., late Specialist in Surgery, Military Hospital, Devonport. London: Harrison and Sons, 45 Pall Mall, S.W., 1917. Price, four shillings net.

From his own large personal experience the author has accumulated the material for this small monograph, which may well be studied with interest and profit by both physician and surgeon. The difficulties in diagnosis and the debatable points in treatment are well elucidated by case histories from the author's practice. Particular interest will be found in the chapters on post-operative treatment and on post-operative complications, where great detail is used in describing the various measures to be adopted or the different situations that may arise.

This is a book we can heartily commend to the profession.

Cancer, Its Cause and Treatment. By L. Duncan Bulkley, A.M., M.D., Senior Physician to the New York Skin and Cancer Hospital. New York: Published by Paul B. Hœher, 67-69 East 59th Street, $1.50.

The author's views on the causation of malignant neoplasms have not been accepted by the medical world at large. The present volume is formed from a series of lectures delivered at a post-graduate course in New York, and is intended to amplify and explain a former volume which appeared two years ago. The conclusions reached are at least worth serious consideration, coming from a man with such an enormous experience as Dr. Bulkley.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles, by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia. Vol. I., twenty-seventh series. 1917. Philadelphia and London: J. B. Lippincott Company.

For many years these quarterly volumes have contained articles on things of interest to medical men, all more or less interesting and instructive. It is now proposed by the publishers to introduce a new feature whereby the "Clinics" shall become more true to name, and it is hoped, even more useful to their many readers. Beginning in June, there will be a series of clinics by some of America's best-known physicians and surgeons.

This number is fully up to the high standard of its predecessors.

"What precautions do you take against water infected by microbes?"

"Well, mum, we boils it—"

"Yes?"

"Then we filters it—"

"Yes?"

"—Then we drinks beer."

Patient (after x-ray examination)—Nurse, could ye foind out where they're goin' to run them movin' picters they tuk o' me insoides?

"An' how are thim twins o' yours, Mrs. Casey, thot look so much aloike?"

"Sure, wan o' thim's sick, an' we don't know which wan!"
—*New York Times.*

Selected Articles

THE PSYCHOLOGY OF FEAR AND THE EFFECTS OF PANIC FEAR IN WAR-TIME

By Sir R. Armstrong-Jones.

It is an acknowledged fact that in the whole annals of mankind the most eventful period of a nation's psychology is that during which its people is passing through the crisis of war, and the history of nations from the earliest dawn of society presents continual records of war-like operations. Looked upon psychologically, war is the manifestation of a biological law, and it is the embodiment in man of a primordial and deep-rooted instinct. War is the resistance or the opposition to an innately organized force to be free, an instinct which is associated with the emotions of anger and hate, as well as fear.

Psychologists and physiologists now all teach that the emotions have very definite physical correlatives. Pawlow, Elliot, Cannon, Sherrington, Shand, and Crile have all urged this. The presentation of consciousness of visceral sensations was an early recognition. The Psalmist referred to it, "my bowels yearned within me," "my tongue cleaved to the roof of my mouth," and we have frequent references to the organic sensations in the visceral perturbations, precordial anxieties, rapid pulse, and "cold sweats" of shell-shock cases. A young officer, who had obtained the Military Cross for bravery, told me that on one occasion when alone and in danger he was overcome by a sudden fear, something within me seemed to pass right away," and his body began to tremble; but by an effort of will this passed off, otherwise his feeling was to get away from where he was. In all dangers the effect is the same, and Crile states that the whole effort of the organism is to obtain an "atmosphere" of "anoci-association," *i.e.*, protective visceral reflexes occur, and these are precisely similar to the visceral results after the injection of adrenin or epi-nephrin into the blood stream, which prepare the organism for combat or flight. Although the action of the central nervous system is of the syndromic variety, the cortex being organized and activated to a high degree of perfection upon an united basis, yet the mind may become dissociated and any one element may pre-

dominate. Fear, especially of the vague, marginal, subconscious type, may effect this, especially when the bodily defences are lowered by stress and insomnia; then any sudden overwhelming cause, particularly loud noises or sudden unexpected sounds may bring about a dissociation, as seen in so many shell-shock cases. Witness, for instance, the deaf and dumb, who are even unable to whisper, those who may be said to be "struck dumb" by fear, or those who lose their sight and are "struck blind," yet who recover suddenly, or those who exhibit sensori-motor disturbances and are seen in large numbers in the various military hospitals. In regard to sensory disturbances, it is the most highly evolutionized and the least organized that soonest suffer dissociative dissolutions, hearing and sight rather than taste and smell. As to sensori-motor disturbances, we realize that consciousness is a continuous dynamic process. It is now taught that the normal cortex is in a state of constant nervous tension ready at any instant to discharge and respond to any stimulus, the most facile track being the most ancient as well as the most elementary and the most accustomed—*i.e.*, that through the lower motor neurons, so that when any disturbing stimulus arises the co-ordination of all the usual intercurrent stimuli in the cortex is affected, and the discharge occurs along the easiest routes. Not infrequently this discharge excites other areas in more distantly related centres, its form depending upon the individual temperament or upon the readiness of innately organized areas to respond. Loud noises often act as disturbing stimuli, because hearing depends upon very specific receptors, the delicate hair cells to which the tectorial membrane resounds, and there is an intimate association between tactile and auditory sensations as well as between motor and auditory; thus any sudden stimulation of the specific auditory epithelium is capable of re-acting in a very general way upon the mental functions. The stream of sudden stimuli to the auditory nerve must also affect its vestibular branch, which is closely connected with the static sense and with the control of movement, and although the vestibular nerves give rise to no sensations they are nevertheless closely related to the roots of the motor oculi nerves as well as to other motor centres in the medulla and cerebellum. They thus serve to keep up the bodily balance, and to keep the eyes fixed upon the same point in spite of movements of the head and body. All auditory impulses, as well as visual, must therefore be continuously correlated with movements, yet there

is no knowledge in consciousness that these movements are made or produced during normal hearing and seeing.

A large number of shell-shock cases exercise uncontrolled movements, especially when suddenly spoken to; this fear is often imitative and may be excited through suggestion. A soldier suffering from shell-shock was out on parole when he saw a horse fall; suddenly he went down himself and had to be carried back. An aeroplane pilot had a false landing, and fell on his head. He was blind for three hours, and at intervals completely loses sight and feels dizzy, being unable to stand or walk, although there is no organic lesion.

The extreme suddenness of the symptoms is only equalled by the suddenness of their disappearance, which seems to suggest the assumption of some entity—"mind," and the mental experiences of the war favor a view of interactionism rather than of parallelism as to the relationship between mind and body. A shell-shock case, deaf and dumb, walked up Parliament Street, when he was suddenly greeted by his brother, whom he had not seen for several years; he spoke from that moment. A group of cases went to witness a transpontine melodrama, a part of the play being the explosion of a mimic shell on the stage; five of their number had to be carried back and one became aphasic and aphonic. These are only a few out of many cases.

As to the cause of shell-shock, although an indescribable unknown fear is a preliminary condition, it is impossible to dogmatize, when the symptoms are so variable. J. B. Austin has shown that in every case where psychic stimuli had been applied to excess, experimentally, by frightening caged animals with dogs and by worrying rabbits and keeping animals from sleeping for long periods, definite neuronic changes with hyperchromatism and later complete chromatolysis have been observed in the cerebrum, cerebellum, medulla and cord, also in the cells of the liver, thyroid and suprarenals, so that we may be said to fear in our visceral organs as well as in our brains.

At least five views have been expressed as to the causes of shell-shock: (*a*) the sudden effect of an unexpected great fear or terror or fright acting without warning as a strong emotional shock; there is no doubt, from experimental records, that a physiological if not an organic change occurs in the cytoplasm of the neurons, and such a shock would tend also to dissociate the cerebro-spinal from the automatic system, and would thus give rise to the sympathetic symptoms presently to be named; (*b*) another cause is stated to be hypothyroidism;

this accords with the microscopic examination of the roots of the vagi and other neurons in some acute cases of neurasthenia; (*c*) hyperthyroidism, which is said to arise in some cases in connection with an enlargement of the thyroid; (*d*) the inhalation of poisonous gases, such as carbon monoxide or phosgene, which causes a disintegration of the red blood cells and consequent hæmorrhages; lastly, (*e*) a definite molecular physical injury due to the exceedingly high pressure—sometimes positive and sometimes negative. Mr. Ernest Clarke has seen an eye actually destroyed by being torn out of its socket during the bursting of a high-explosive shell. It is considered that the cerebro-spinal nervous system hangs in a bag of fluid, or rests upon it, and that any shock communicated suddenly to the fluid would be felt mostly by the delicately anastomising neurons in the motor horns sooner than by the neurons of the posterior spinal root ganglia, which are protected in a sheath of dura mater in the intervertebral spaces; also that the controlling neurons of the intermedio-lateral tracts would be affected. This accords with the experience that motor symptoms are more frequent than sensory, and that there occurs a dissociation between the cerebro-spinal and sympathetic ganglia resulting in the dilated pupil, rapid heart, irregular breathing, precordial pains and visceral disturbances, all of which are sympathetic symptoms frequently met with in shell-shock.

Fear connotes a mental state in which the future appears to dominate the present, whilst the actual present is a revived experience of the past, this experience being a painful one; it is this revival that constitutes the emotion of fear. The power to experience fear is necessary to self-preservation, and is met with in early conscious life as well as in animals, the most easily frightened member of the herd, *cæteris paribus*, having the best chance of survival. Fear acts as a tonic to some natures, and to most of our soldiers at the front their life without peril or danger or fear would be insipid and flat. Fear is of two kinds, the sudden "unconscious" indescribable reaction to danger, which is highly infectious, and the reasoned fear of the courageous man. It is the former that causes masses of people to experience panic, and is the most characteristic of shell-shock cases who should not be treated together, but, as has been wisely suggested, interspersed with "super-optimists."

Practically all cases of shell-shock, which, I maintain, are caused through sudden unconscious fears and awe, are quite restored if treated early.—*The Medical Press and Circular.*

Selections

Substitutes for Salvarsan and Neosalvarsan in the Treatment of Syphilis

The difficulties which have existed during the last few months in obtaining salvarsan and neosalvarsan have naturally turned the minds of members of the profession to the question as to whether satisfactory substitutes could be utilized. In Canada a preparation virtually identical with salvarsan is now manufactured and widely sold, and during the time that salvarsan and its ally were practically unobtainable in this country Schamberg of Philadelphia placed upon the market a substitute or identical preparation which, since the introduction of a new supply of salvarsan, has had to be withdrawn under the patent law. Both the preparation made in Canada and that made in Philadelphia have given fully as good results as those made in Germany, but at the present moment cannot be obtained in the United States.

Some years ago no less a leader than the late J. B. Murphy, of Chicago, advocated the use of cacodylate of sodium in large dose in the treatment of syphilis, claiming that he had obtained excellent results from its employment. Because of its comparative cheapness and the ease with which it can be obtained a large number of practitioners have followed his footsteps, and, in some instances, the hypodermic administration of cacodylate of sodium in syphilis has seemed to be distinctly beneficial. The point, however, is as to whether it is distinctly curative in the sense that it is capable of destroying the spirochæte of syphilis.

Notwithstanding the high hopes which we had when salvarsan was first introduced, to the effect that this new compound would destroy every spirochæte in the body, hopes which were speedily dashed to the ground by experience, it would, nevertheless, appear that salvarsan or neosalvarsan is the most efficient destroyer of the spirochæte that we have, unless possibly sodium salvarsan, a still newer compound, proves ultimately equally efficacious.

So far as the cacodylate of sodium is concerned, the point is not as to whether the patient improves under its use, but whether the spirochætæ in his body are promptly destroyed so

"Rectify Wrong Living

And You Correct Many a Chronic Ill"

Every-day practice brings to notice many a case of obscure symptom based upon functional derangement rather than organic disease.

Tea and coffee drinking is too pronounced a causative factor in modern diagnosis to escape the ken of the observant physician. The migraine, bilious attack, heart palpitation, visual disturbance, indigestion, constipation, or nervousness often suffered, is a cause of worry equally to physician and patient.

To interdict tea and coffee in all suspicious cases is the first step toward relief, and to provide an agreeable alternative that is free from drugs, is the next.

Along with proper remedial measures to correct the previous damage of the tea or coffee habit, an insistence that the patient stop coffee, and use a wholesome food-drink, such as Postum, helps amazingly in effecting improvement.

Postum comes in two forms. **Postum Cereal**—the original form—must be well-boiled to bring out its delicious flavor; **Instant Postum**—the soluble form—requires no boiling, but is made in the cup instantly with hot water.

The ***Clinical Record,*** for Physician's bedside use, together with samples of **Instant Postum, Grape-Nuts** and **Post Toasties** for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

Canadian Postum Cereal Co., Ltd., Windsor, Ont., Can.

that he ceases to be a disseminator of the disease and ceases to be a hotbed for the multiplication of the spirochætæ, which will attack his own tissues. Recent investigations have seemed to indicate that as a destroyer of spirochætæ cacodylate of sodium is powerless. Nichols, Cole, and others, the first using animals and the latter experimenting with mankind, have proved that its spirochæticidal property is almost, if not quite, *nil;* that it does not change a positive Wassermann test into a negative test, nor heal the mucous patches which so frequently disseminate the disease. While it may exercise some good effect upon the skin lesions of syphilis, these effects do not approach those induced by mercury or potassium iodide, and these facts apparently hold true when the dose which is given is larger than is commonly thought safe.

These facts are by no means surprising when we consider the nature of cacodylate of sodium. While it is true that by its use we can inject into the body a greater amount of arsenic than we could with safety if the older preparations of arsenic are used, it must be borne in mind that this is because the cacodylate of sodium is broken up with so much difficulty and gives off its arsenic so slowly that, while the dose which is injected may be large, the dose of active arsenic which the body receives in general is comparatively small. Cyanide of potassium is exceedingly poisonous, but ferrocyanide of potassium is innocuous, not because the hydrocyanic acid in one compound is any less powerful than the other, but because the latter compound is so stable that practically no hydrocyanic acid is set free after the compound is ingested.

In this connection an interesting question arises as to whether neosalvarsan can be considered as an efficient substitute for old salvarsan. There has been in the past much difference of opinion in regard to this matter, based possibly upon clinical observation without great accuracy, and upon the fact that manufacturers of neosalvarsan admit this to be the case, and direct that larger doses are essential if effects similar to those induced by salvarsan are to be obtained. Trimble and Rothwell have attempted to decide this point by careful investigation of syphilitic patients. They believe that they have proved that there is no great difference in the therapeutic value of the two preparations, and, because of the ease with which neosalvarsan is administered and the small quantity of liquid which must be injected when it is employed, they believe that it is the superior compound. So far as we know, this seems

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to have been the general opinion of many competent practitioners with the proviso that the dose has to be larger than that of salvarsan. That is, the compound neosalvarsan does not provide the arsenic in sufficient quantity and in proper form to accomplish the results induced by salvarsan unless a large dose is used.

It is interesting to note a point which most workers in this field have already emphasized, namely, that Trimble and Rothwell believe that four injections of salvarsan or neosalvarsan in the treatment of syphilis are quite inadequate, and that the use of these drugs, unless they are followed by mercury, is also inadequate. These facts cannot be too widely disseminated. Doubtless fifteen or twenty years from now many cases of syphilis of the nervous system will be met with in patients who have been assured that they have been cured by the administration of salvarsan or neosalvarsan, but in whom the infection has only been submerged and not eradicated, as it would have been had mercury been faithfully employed. There seems to be little reason for considering that a patient with a well-established infection is safe, so far as his own constitution is concerned, any sooner to-day, since the introduction of salvarsan, than he was prior to its introduction. This may be a somewhat exaggerated way of stating the matter, but it serves to emphasize what we have constantly taught, namely, that salvarsan may be compared to a chemical engine, which is efficient in putting out a fire in its early stages which threatens great damage, whereas mercury is to be compared to the fire engine, which is always called upon to eradicate a conflagration which is actually in its full vigor.

Finally, it would seem probable, from our increasing knowledge of various infections and from what we are continually learning concerning the activities of salvarsan, that all syphilitic infections are not identical in virulence and that some strains of spirochætæ are much more insusceptible to antisyphilitic remedies than others.

We are glad to see that Baum, of Syracuse, and Schamberg, of Philadelphia, have recently emphasized this point and have also called attention to the fact that certain strains of spirochætæ have a greater affinity for certain tissues than for others. Ever since Rosenow showed so clearly that microorganisms dwelling in certain tissues develop an affinity for similar tissues in other hosts it has seemed likely that spirochætæ derived from mucous membranes would have an affinity

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for these tissues which will be greater than spirochætæ derived from the vascular, renal, or hepatic tissues, and this, perhaps, explains why salvarsan seems so efficient in one case and so feeble in another; the most noteworthy instances being in so-called late syphilis of the central nervous system, in which Noguchi has proved the presence of living parasites in the perivascular spaces, in which spaces the salvarsan, either directly or indirectly, seems incapable of thoroughly exercising its powers.—*Therapeutic Gazette.*

The Etiology of Haemorrhagic Retinitis

A thesis by M. Amsler, based on 164 cases of hæmorrhagic retinitis occurring in Lausanne (*Correspond. bl. f. Schw. Aerzte*, 1917, p. 318) gives an interesting analysis of the etiology of this complaint. The cases were taken from both private and hospital practice. Stated in percentages, the etiological factors were as follows: Arterio-sclerosis, 55; heart disease, 8; albuminuria, 8; glycosuria, 3; menopause, 6. The percentages incidence in successive decades from 20 to 70 years was 4, 7, 13, 27, and 36 respectively, and 13 above 70 years. Nearly two-thirds of the cases were in women, and in them the prognosis was relatively more favorable, especially in the cases associated with the menopause. In 20 cases the typical picture of thrombosis of the central retinal vein was present, and in one of these—a woman aged 47 years—sight was restored in 6 months, and vision was still 4-5 four years later. The low percentage of cases of albuminuria in these statistics is somewhat remarkable, but tends to support the views recently expressed by Dr. P. C. Bardsley (*British Jour. of Ophthalmology*, April, 1917), that the prognosis in cases which show moderate vascular disease of the retina is not so bad as has generally been thought. As has been shown by Mr. Foster Moore (*Quarterly Jour. of Med.*, Jan., 1917), cases of retinal vascular disease must be classified in various categories, the prognosis varying according to the particular type. It is therefore somewhat misleading to regard hæmorrhagic retinitis as a single clinical entity; it is a symptomatic condition which must be evaluated according to concomitant factors.—*The Lancet.*

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Miscellaneous

Surgical Treatment of Acute Epididymitis

McKenna (*Surg., Gyn. and Obstet.,*), concludes that surgical interference in acute epididymitis is necessary only when the patient is suffering excruciating pain. When this procedure is carried out it is necessary to divide the fasciæ so as to free the tension from the testicle as well as from the epididymis. Patients are less apt to be impotent if the posterior wall is divided carefully and the pus drained off, then if the pus is left for nature to absorb. A blind stab operation should certainly not be done or even considered. It is not enough to expose the epididymis and drain it; all the fasciæ should be free. It is not necessary to split the epididymis but only the infected chamber which stands out clearly.—*American Medicine.*

Swiss Medical Profession on a War Footing

War has not directly invaded Switzerland, but the military forces have been kept on a war footing for nearly three years. Dr. E. de Buman, in a recent address before a medical organization, told how this had affected the profession. He commented on the multiplicity of duties it entailed, the sacrifices that had to be made and the devoted services that had been lavished. "For some," he said, "there were the sudden separations, the sacrifice of a career laboriously built up, the crumbling of the dreams for the future. For others there was the extra work at the hour when weariness and age called for taking things less strenuously; for all it was the obligation to break with a life of well organized work and to sacrifice on the altar of patriotism the most legitimate and the dearest aspirations. Our younger confrères left, full of zeal, to respond to the appeal of the military authorities. The older men added to their work in the hospitals and elsewhere an extra amount of labor and efforts, while the still older ones shouldered anew the burdens which they had partially shifted to younger men. . . . From behind the French front, in Belgium, in the Balkans, and elsewhere, we hear of the devotion of Swiss physicians who are leading special missions at many points. In Switzerland it has been the medical profession that has

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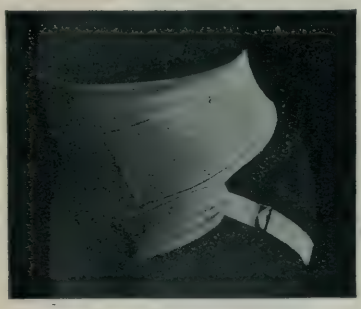

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Radium in Surgery

Radiotherapy, which was developed by the French, particularly by Dominici, Wickham and Degrais, is now employed more or less widely in all parts of the civilized world, and opinions with regard to its value are now fairly definite. At the present time the fact is recognized that radium, employed surgically, often brings about favorable results, but that it has its limitations.

In the current issue of this journal is presented an able and exhaustive paper by Dr. Frederick C. Harrison, of Toronto, in which the value of radium in post-operative conditions is discussed in a conservative manner. Dr. W. H. B. Aikins, of Toronto, with whom Harrison has been working for several years, is well known as one of the most prominent exponents of radium treatment on this continent, and he enjoyed the inestimable advantage of friendship with the late Dr. Wickham, of Paris. Harrison's paper undoubtedly presents the radium question from the surgically therapeutic standpoint in an eminently fair fashion and is earnestly commended to the close attention of our readers.

It may be taken for granted that radium holds an important position in the treatment of certain diseases and of many post-operative conditions, and, perhaps, especially in the therapy of cancer of the uterus. Jellet, the Dublin gynæcologist, has recorded his opinion that radiotherapy is indicated in the treatment of malignant disease, first, when operation is impossible on account of the age of the patient, organic disease, or the extent of the tumor or its metastasis; second, when the extent of the disease brings the case on the borderland of operability, to render it operable; and, third, as a prophylactic treatment after operation to prevent recurrence. C. F. Burnam, *Bulletin of Johns Hopkins Hospital*, 1915, Vol. 26, page 190, writing of his experience with radium in the private hospital

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of Howard A. Kelly, gave as his opinion that treatment with radium is indicated for benign growths, preliminary to surgical interference, in all inoperable malignant growths, particularly sarcomata, and in all the operable cases in which surgery will cause great disfigurement. Surgical methods and radium may well be combined in the treatment of operable growths. It would be extremely unwise to make extravagant claims for the surgical uses of radium, but it may be said with little fear of contradiction, that the evidence of even the most conservative and experienced of clinicians is in favor of its value as a healing agent. At the same time, the evidence is equally strong that it has distinct limitations. Generally speaking, according to the weight of authority, surgery is still indispensable in the majority of malignant growths—radium and the x-ray being employed not to replace but rather to supplement surgical procedures. Likewise, it should always be borne in mind, that these agents must be intelligently used and, in the case of radium, in adequate amounts. Harrison in his paper emphasizes the importance of carrying out postoperative radiation promptly. Finally, we would reiterate that radium or x-ray therapy is a valuable auxiliary to surgery, and that in the treatment of many conditions, and especially of certain cancerous growths, these methods of treatment should go hand in hand.—Edit. *International Journal of Surgery.*

Disadvantages of the Milk Regimen in Fevers

The milk regimen is admitted to have rendered in the past a great amount of good, and to-day it is equally serviceable. Nevertheless, it is not ideal, either in theory or practice, for many subjects remain intolerant to it while others are perhaps damaged by its use. Last year a Paris thesis, written by Claisse, and inspired by Gilbert, had for its subject the disadvantages of the milk regimen in fevers. The writer prefaced his argument by the statement that the febrile patient suffers more or less from insufficiency of the digestive organs. Digestion may not be performed, and by the same token fermentation and absorption of toxic material may replace it; so that for the milk regimen a rigorous fast must be substituted for the time being. While this state of affairs is more apt to obtain in the nursling, it may be in evidence in the adult as well. Some people cannot digest milk in health, while others

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who tolerate it excellently in health cannot manage it in febrile conditions. It is in typhoid fever that the problem assumes great significance. Patients will often tolerate milk for a time, only to rebel suddenly against it. The entire picture of typhoid becomes aggravated; fever increases, as does meteorism; diarrhœa appears, and the stools contain undigested curds. If milk is continued a vicious circle is set up but if it is discontinued benefit is at once apparent. As soon as intolerance and bad effects are noted the author at once suppresses the milk and places the patient on a "water diet" for one or two days, the only nutriment allowed being sugar, rice flour, and vegetable broths. At the end of this time then, every four hours, the patient receives cream of barley soup, panada, potato purée, a little rice, or semolina. The sugar used is for sweetening the patient's drink, which amounts daily to two quarts—in the form of wine, lemonade, sweetened water, weak tea, weak coffee, decoctions, etc. Cereal soups may be strengthened by the addition of powdered cocoa. This regimen is intended to replace milk completely until defervescence has occurred. It ferments but slightly, promotes diuresis, and prevents emaciation. When the temperature becomes nearly normal the patient resumes milk in a modified form—kephir, yog-hurt, etc.—until unmodified milk can be tolerated; the latter is then given in association with egg yolk, scraped raw beef, etc., until solids can be substituted.—*Medical Record.*

The Inventor of Esperanto

Lazarus Ludwig Zamenhof, whose death is announced in Warsaw on Saturday last, was 57 years of age and a native of Bialystok in Russian Poland. Of delicate health, he was intellectually precocious, reading and writing well at the age of four. In 1873 Zamenhof's father having been appointed inspector of private schools at Warsaw, the boy finished his education there, going on to Moscow University to study medicine. After qualifying in 1885 he returned to Warsaw, where he specialized as an ophthalmic surgeon. Warsaw, with its mixed population of Russians, Poles, Germans, and Jews, early directed Zamenhof's attention to the need for a common language as an instrument of better civic and racial understanding. Zamenhof drew attention to a preliminary form of Esperanto in 1878, but it was not till 1887 that he published his first text-book. Warsaw

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did not greet its local prophet with enthusiasm, and it was only after obstinate opposition that his propaganda spread through to Poland, Russia, Germany, Sweden, France, and finally in 1902, to England. In 1905 the first Esperanto Congress was held at Boulogne-sur-Mer and since then large gatherings have collected annually at Cambridge, Dresden, Barcelona, Washington, Antwerp, and Cracow, at which all the nations of the world have been represented. Medicine and pharmacy are now represented by the *Tutmonda Esperantista Kuracista Asocio* and the *Internacia Esperantista Farmaciista Asocio* respectively, and a medical periodical, *La Kuracisto,* only ceased to appear on the outbreak of war. Zamenhof therefore lived to se a large measure of recognition given to his ideal of the drawing together of the races by means of a language which could be commonly used in addition to their native tongues.—*The Lancet.*

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Original Communications

SOME OBSERVATIONS ON THE USE OF DIURETICS IN NEPHRITIS*

Henry A. Christian, M.D., Boston.

If you were asked what to do with a nephritic patient whose renal function was below normal, the natural reply would be, "Take such steps as are necessary to restore renal function to a normal level." To-day I wish to devote my time to a discussion of what part diuretic drugs should play in such an attempt to restore renal function.

It is interesting at the outset to see what advice we are given as to the use of diuretic drugs in nephritis by writers in some of the recent systems of treatment. In Forchheimer's Therapeusis of Internal Diseases (Appleton, Vol. IV), Miller says: "Diuretics may be used in all forms of nephritis, provided we avoid those preparations which act as intense kidney irritants." "The various alkaline diuretics, caffein and digitalis, may be safely administered in all forms of nephritis." . . . "Animal experimentation and clinical experience have shown that when the kidney has lost its ability to eliminate water it has also lost its power to respond to diuretics." . . . "Diuretics may be tried to increase the flow of urine, but are rarely of value in acute nephritis." . . . "Diuretics usually have the desired physiological effect in chronic parenchymatous nephritis." Under chronic interstitial nephritis no advice is given as to the use of diuretics.

In Hare's Modern Treatment (Lea & Febiger, Vol II), Tyson, in speaking of acute nephritis, after referring to catharsis, says: "Diuretics of the saline class should be simultane-

*Read at meeting of the Ontario Medical Association, Toronto, June, 1917.

ously used." . . . "To these may be added the cardiac diuretics, tincture of digitalis or tincture of strophanthus." . . . "Failing to secure diuresis by these measures, other diuretics may be resorted to," and he mentions theobromine among these. . . . "These diuretics (theobromine, etc.), are thought to act directly on the kidney or its blood vessels, and not through the heart as digitalis and strophanthus. They, therefore, require a certain integrity of the kidney to become efficient." In regard to chronic parenchymatous nephritis, Tyson says: "The kidneys which, as intimated, are still quite responsive to diuretics, should be greatly stimulated. In speaking of chronic interstitial nephritis he says, "The elimination of solids is slightly increased by stimulating the flow of urine, but toxic excretion is better stimulated by acting on the skin and bowels."

In Musser and Kelley's Practical Treatment (Saunders, Vol. III), Le Fevre writes, "Increased elimination of the kidneys is generally impossible when uræmia occurs in acute diseases of the kidney. The stimulation of the kidneys by diuretics increases the inflammatory condition." . . . Of uræmia in chronic cases, he says, "The danger of stimulating the kidneys by the different forms of diuretics is much less than in the acute inflammatory type, although the uræmia may be associated with more or less acute changes in the kidney." In acute nephritis Le Fevre on the whole favors the use of mild diuretic drugs, but there is an undercurrent of doubt as to their real value. As to theobromin, caffein and theocin, caution is urged. He says, "Granting that they do not produce in the normal kidney any irritation, in the inflamed organ they have the power of increasing the pathologic hyperæmia and so increase the intensity of the inflammation." In chronic parenchymatous nephritis, referring to these same drugs, he says, "The use of these preparations is without danger and often very efficacious," but he cautions against the use of diuretics when there are symptoms of acute inflammation. As to chronic interstitial nephritis, Le Fevre says, "The use of diuretin, agurin and theocin is indicated when diminution in the amount of urine and the appearance of œdema are due to failure of cardiovascular compensation." These three writers represent quite well the present-day teaching in regard to diuretics.

This problem of the use of diuretic drugs in patients with nephritis is one that has interested me for some time. From experimental work on animals with acute nephritis, I and my associates have shown very clearly the injurious effect of various

diuretics (theobromin sodium acetate,[1] theocin, caffein, potassium acetate and water[2]), in that they tended to shorten rather than to prolong life, and that their effect, as measured by renal excretion, was *nil,* inconstant or actually depressant,[3,4] dependant somewhat on the severity of the renal lesion. Even so mild a diuretic as increased amounts of water at times seemed to produce damage. If this is true for animals under experimental conditions, it seems likely that the same would apply in the human being with acute nephritis.

In one form or another the three writers, whom I have already quoted, express scepticism about the efficiency of diuretic drugs in acute nephritis. Miller says the kidney that has lost its power to eliminate water has lost its power to respond to diuretics, and points out that to increase the flow of urine in acute nephritis they are rarely of value. Tyson points out the necessity of a certain integrity of the kidney. Le Fevre warns that diuretics may increase the inflammatory process.

It seems to me perfectly clear that diuretic drugs are capable of doing injury in acute nephritis. All writers seem pretty well agreed on this. That being the case, the possible advantages of diuretic drugs ought to be clearly proved in order to justify their use when they may do harm.

Let us stop to consider what action diuretic drugs may be supposed to have, and then determine whether such hypothetical actions are apt to benefit the patient with acute nephritis. Finally, is it probable in the given case that the diuretic drug will produce desirable effects? Diuretics, if effective, will increase the urine output. In so doing they increase the excretion of water and solids. To increase the water output may be beneficial in several ways; to remove water accumulated within the body, to cause excretion of more solids, to dilute and so decrease the effect on renal structures of substances excreted through the kidneys.

In most patients with acute nephritis, œdema is moderate and a cause of no discomfort or danger. So in most patients with acute nephritis, the mere removal of water is of no practical use. In a few patients œdema is excessive and discomforting; its removal would be beneficial. Unfortunately, however, in most patients with œdema from acute nephritis, the kidney will not respond to diuretics, as I have pointed out in some previous papers.[5,6] Rarely it will, and so cautious use of diuretics is justified. It must be realized that diuretics can injure, and so, if moderate doses do not increase the urine flow, it

seems wisest to stop their use rather than to increase dosage. If moderate doses increase urine flow, continuation of their use is indicated until such time as urine flow begins to decrease.

To cause an increased excretion of solids, apart from water, would seem to be of no value unless the retention of these substances produced toxic effects. There seems little evidence that most of these solids are injurious, even if retained in cases of acute nephritis, apart from the osmotic effect in determining œdema, and as we have already seen, œdema rarely troubles in acute nephritis. As to the hypothetical toxic substances, if their excretion could be increased by diuretics, obviously it would be very advantageous. That they are, or can be, seems highly problematic. Certainly no direct proof exists, and a better method seems available through the intestinal tract and skin by bleeding. Anyhow, most cases of acute nephritis are not toxic in this sense, and on this basis diuretics are not indicated. In the patients with uræmia, diuretics are just as apt to aggravate the renal lesions, decrease elimination and so do harm rather than good.

Can solids in concentrated form injure the kidney during excretion? This again is problematic. It is the basis of the increased fluid intake treatment of acute nephritis. The real effect of this still awaits clear proof. It would seem desirable on this theory to increase urine flow when that is possible, provided such increased activity does not injure further the already damaged kidney. The best way to do this, it seems, would be to increase the fluid intake rather than to use diuretics, and even this possibly may lead to increased retention from fatigue of the injured renal cells.

In my own experience, I have yet to see the case of severe acute nephritis in which I felt that diuretic drugs did any good. I have certainly seen cases in which damage resulted. In a mild case I can see no reason whatsoever for the use of diuretic drugs. For these various reasons in practice I use diuretic drugs in acute nephritis but extremely rarely, and most of my use has been with caution and as part of a study to see whether I can demonstrate good effects. In this, so far I have failed it seems to me, if results are evaluated with due allowance for the accidental. In acute nephritis I advise against the use of diuretics, except in the occasional case, and of their value in such a patient I am extremely sceptical. The routine using of diuretic drugs in acute nephritis certainly is to be advised against.

In cases of chronic nephritis with œdema, the writers already referred to seem to place more faith in the efficiency of diuretic drugs than they do in cases of acute nephritis. In such patients do diuretics cause a diuresis? In answering this question, a sharp line must be drawn between those patients in whom œdema is of purely nephritic origin and those in whom it is in large part, if not wholly, of circulatory origin. As I see patients with chronic nephritis, the second group is by far the more frequent. In such patients usually there is evidence of myocardial insufficiency, often such disturbances are found as auricular fibrillation or other forms of arrhythmia, pulsus alternans or disturbances in the form of ventricular complexes as revealed by electrocardiographic study. These patients have dyspnœa and cyanosis. They look like patients with cardiac insufficiency. There are albumen casts in the urine, and tests of renal function show depression of renal activity. These renal disturbances, however, are largely circulatory in origin, and such patients on digitalis improve in general condition and their urine output increases.

In the group where œdema is due to renal insufficiency, there are no signs of cardiac insufficiency. Usually albuminuria is more marked. Digitalis in such produces little, if any, improvement. Renal function is depressed.

What is the action of diuretic drugs in such cases? I have previously made a report on some such patients, and I have suggested using the effect of a diuretic drug to separate patients into these two groups.[59] I have found that where œdema is chiefly of renal origin, diuretic drugs have very little effect in increasing urine output, while in the other group, if the cardiovascular mechanism is capable of response to digitalis or other therapy, diuretic drugs produce a striking, prompt increase in urine output. It may be well to give some further examples of these effects.

Case 1, P.B.B.H. Med. No. 4776, male, age 58, with a history of chronic nephritis, showed ascites and marked œdema of the legs. His heart was not enlarged, and there was no evidence of myocardial disturbance. His systolic blood pressure was 140, diastolic 90. His urine contained a large amount of albumen and many hyaline and finely granular casts. On June 7th, his 'phthalein excretion was 34 per cent. in two hours, his blood urea nitrogen 23.3mgm. per 100cc., and his McLean index of urea excretion was 10.7 per cent. On June 11th he received 3 doses of 0.2 gm. of theocin at 6, 9 and 12 o'clock.

which increased his urine output from 540 cc. to 740 cc., but did not produce a positive diuresis. Two days later his 'phthalein was 29 per cent., his blood urea nitrogen was 24.23 mgm. per 100 cc., and his index of urea excretion was 25.1 per cent. On June 14th and 15th digitalis was given, a total of 0.6 gm. of powdered leaves, and on the 16th, 3 doses of 0.3 gm. of theocin at 9, 6 and 12 o'clock. This combination produced a somewhat greater, but still relatively slight, diuresis. On the day prior to the first theocin dosage to the day following the second the weight of the patient was unchanged, 86.6 kilos, showing that no actual loss of œdema was produced. This patient had œdema of renal origin, and there was no diuretic response.

Case II, P.B.B.H. Med. No. 5004, male, age 59, with a history of chronic nephritis, showed marked œdema of the legs. His heart was moderately enlarged, but there was no evidence of myocardial disturbance. His systolic blood pressure was 240, diastolic 120. There was a marked degree of albuminuric retinitis. His urine showed a trace of albumen and frequent hyaline and granular casts. On July 21st his 'phthalein excretion was 35 per cent. in two hours. On July 25th his blood urea nitrogen was 20 mgm. per 100 cc., and the McLean index of urea excretion was 31.2 per cent. On July 26th he received 0.2 gm. of theocin at 6, 9 and 12 o'clock, which did not increase his urine above the usual daily average, which had shown a moderate diuresis since admission. On July 27th his blood urea nitrogen was 21.6 mgm. and his index of excretion 25.5 per cent. During 25 days' stay in the hospital, his œdema almost entirely disappeared, his weight dropping from 95.6 kilos to 78.2 kilos. Except for the diuretic on a single day, his treatment consisted in restriction of fluid and a diet relatively low in proteid and salt. Like Case I, this patient's œdema was of renal origin.

Case III, P.B.B.H. Med. No. 5239, female, age 55, has had dyspnœa and swelling of the legs for some time. When seen in the hospital she had ascites and œdema of the legs. Her heart was enlarged and irregular. Her systolic blood pressure was 180, diastolic 120. She had pulsus alternans, ectopic beats and disturbance in the ventricular complex, indicating faulty conduction in the distribution of the right branch of His bundle. Her urine contained a trace of albumen and frequent hyaline casts. On September 3rd her 'phthalein was 40 per cent. in two hours. On September 5th her blood urea nitrogen was 13.6 mgm. per 100 cc., and the McLean index of urea excretion was

67.2 per cent. On September 9th she got 0.2 gm. theocin at 6 and 9 a.m. and 6.30 p.m., which increased her urine output from 1,000 cc. to 3,350 cc. Her weight decreased from 83.2 kilos on September 3rd to 71.4 kilos on September 10th. On September 12th her blood urea nitrogen was 9.79 mgm. per 100 cc., and her index of excretion 85 per cent. On September 13th, theocin 0.2 gm. at 6, 9 and 12 was again given, with a urine increase from 200 cc. to 1,600 cc. and a further decrease in weight to 69.6 kilos on September 14th. On September 14th the blood urea nitrogen was 11.18 mgm. per 100 cc., with an index of 33.5 per cent. Theocin was repeated in the same dose on September 21st with a similar, though not quite so great, diuresis. On September 23rd the 'phthalein excretion was 40 per cent. in two hours. On October 1st her weight was 60.2 kilos. On October 3rd theocin 0.2 gm. at 6, 9 and 12 increased the urine output from 750 cc. to 1,900 cc. On October 4th the blood urea nitrogen was 9.23 mgm. per 100 cc., and the index of urea excretion was 97.5 per cent. On October 8th the patient's weight had fallen to 51 kilos from an admission weight of 83.2 kilos, and she left the hospital without œdema, and her urine contained a very slight trace of albumen and a rare hyaline cast. Here the œdema was essentially circulatory in origin. With slight renal involvement the kidneys have responded quickly to theocin by an active diuresis.

Case IV, P.B.B.H. Med. No. 4727, male, age 35, has had œdema of the legs and feet and an increasing dyspnœa. When he came to the hospital there was very little obvious œdema. His heart was enlarged with physical signs of a mitral stenosis and insufficiency. Its rate was absolutely irregular and the electrocardiograms showed a typical auricular fibrillation. His blood pressure was 244 systolic and 170 diastolic. His urine contained a very large trace of albumen and many hyaline and finely granular casts. On May 25th his 'phthalein elimination was 49 per cent. in two hours; his blood urea nitrogen was 13.9 mgm. per 100 cc. and the McLean index of urea excretion 34.8 per cent. His weight was 52.6 kilos. On June 24th his 'phthalein excretion was 58 per cent. in two hours. On June 28th his blood urea nitrogen was 17.4 mgm. per 100 cc. and his index of urea excretion was 90.5 per cent. In the hospital œdema gradually appeared and increased so that his weight on July 9th was 63.2 kilos. On July 26th his weight was 62.4 kilos, his blood urea nitrogen was 23.3 mgm. per 100 cc. and his index of urea excretion 29 per cent. On

July 27th he was given 0.2 gm. of theocin at 6, 9 and 12 and his urine increased from 700 cc. on the 26th to 5,000 cc. on the 27th. On the 28th he weighed 57.2 kilos, his blood urea nitrogen was 18.6 mgm. per 100 cc. and his index of urea excretion was 48.5 per cent. On August 1st a repetition of the theocin dosage increased his urine output from 500 cc. to 2,500 cc. A month later his condition was much less good, the cardiac insufficiency having become more marked. At 8 p.m. on August 19th he was given 0.2 gm. theocin and theocin was repeated in a dose of 0.4 gm. the next morning at 8. No diuresis resulted from this dosage. On August 23rd the patient died apparently a cardiac death. In this patient the prime cause of the œdema was cardiac. There was a moderate degree of renal lesion. While the cardiac condition was intact enough to give a circulatory response theocin produced a prompt and active diuresis. Later on when the circulatory condition was not so good theocin failed to produce any diuresis.

Case V, P.B.B.H. Med. No. 4992, male, age 58, has had dyspnœa and œdema of the legs for six months. When he came to the hospital he had considerable œdema of the legs. His heart was enlarged and he had the signs of aortic insufficiency. There was no cardiac arrhythmia. His blood pressure was 180 systolic, 70 diastolic. His urine contained a trace of albumen and occasional granular and hyaline casts. The general impression given was that of cardiac insufficiency with slight renal involvement. However, his 'phthalein excretion on July 19th was only 10 per cent in 3½ hours. On July 20th his blood urea nitrogen was 39.8 mgm. per 100 cc. and the McLean index of excretion was 1.34 per cent. On July 23rd his 'phthalein excretion was 15 per cent. in 2 hours. These tests indicated extensive renal lesion. A course of digitalis of 0.9 gm. of powdered leaves gave no diuresis. On July 24th while still under small doses of digitalis (0.05 gm. twice a day) theocin was given in 0.2 gm. doses at 6, 9 and 12. This increased the urine output from 600 cc. to 1,500 cc. This moderate diuresis again pointed to a renal rather than circulatory cause of the œdema. On July 26th the blood urea nitrogen was 36.5 mgm. per 100 cc. and the index of urea excretion was 2.25 per cent. This patient died August 29th, and autopsy showed aortic insufficiency with cardiac hypertrophy. The kidneys showed extensive nephritis with quite marked changes in the glomeruli. These autopsy findings

were in accord with the results of tests of renal function, and the failure to respond well to theocin, which indicated extensive renal damage with renal insufficiency as a prominent factor in the cause of the œdema.

These few cases illustrate what we have repeatedly seen in observing our patients. They justify the conclusion that when œdema is in very large part due to renal insufficiency a diuretic such as theocin is ineffectual to remove the fluid. Really it should be said that a diuretic drug such as theocin is effectual in increasing urine output in cardiac insufficiency but not in chronic nephritis. Perhaps in some patients with renal œdema without circulatory disturbances theocin will produce a diuresis; so far I have not seen such a patient.

What I have just said of theocin applies too to theobromin sodium salicylate, caffein and potassium acetate, as I have shown elsewhere. The only difference is that in my experience theocin is more effectual than these others in producing a diuresis. I have seen patients for example in whom theocin produced a marked diuresis after and before theobromin sodium salicylate had been used with much less effect. In a patient with aortic stenosis and marked œdema theocin increased the urine output from 800 cc. to 4,700 cc. Two days later theobromin sodium salicylate gave no diuresis. Six days after the first course of theobromin sodium salicylate a second course failed to produce a diuresis. Two days after the second failure from the theobromin sodium salicylate theocin increased the urine output from 900 cc. to 3,700 cc., showing that the kidney was still capable of response. That this difference was not the result of failure of absorption on the part of the theobromin sodium salicylate was shown by giving each later intravenously when the same difference was observed.

Unfortunately theocin is very apt to produce nausea, and this, if for no other reason, renders continuous use undesirable. The nauseating effect seems in large part to be central, and is not avoided by intravenous use of the drug in my experience with a few cases. In the patient just referred to intravenous administration of theocin produced nausea.

In patients in whom I have quantitated sodium chloride and nitrogen output theocin when it produces diuresis increases their output relatively proportionately to the increase in water excretion.[1] Sometimes, however, the sodium chloride output is increased more than that of nitrogen, and occasionally solids are excreted more than would be regarded as an amount pro-

portionate to the increased output of urine. This occurs most often in patients with œdema of circulatory origin, but there is a question as to how much good is done by removal of these solids considered apart from the removal of fluid.

What I have already said in regard to excretion of solids in acute nephritis applies in chronic nephritis. The chronic nephritis case who typically shows toxic symptoms is the chronic nephritis with little or no œdema. In a previous paper[5] I have shown that in 100 consecutive cases of chronic nephritis with little or no œdema, so-called diuretic drugs failed very generally to produce a diuresis. In such a toxic patient at this stage of the process in my experience diuretics rarely increase urine output. Even if they did increase the urine we have little evidence that such increased output is at all effectual in detoxifying the patient. Bleeding is a prompter and more efficient method of removing toxic substances. As a means of treating uræmia diuretic drugs in my opinion are of very little use. Such patients often have a good urine output; at other times the amount of urine grows very scant. Each type is very little affected by diuretic drugs.

If I were to attempt to sum my views as to the use of diuretic drugs in nephritis I would say that in uncomplicated nephritis of all types diuretics are either not indicated because there is no need for increased urinary output, or where there is a need for diuresis to remove œdema or detoxify, they do no good. In other words, in nephritis as such they should not be used. Reduction of fluid intake, salt—poor diet, sweating and purging are better methods for removing œdema. For toxic symptoms bleeding, sweating and purging are more efficacious than diuretic drugs. On the other hand in patients with cardiac insufficiency and relatively little organic renal lesion diuretics are extremely useful to aid in the removal of fluid accumulated in the body. Under these conditions they seem to work best when given intermittently in part because of their tendency to cause nausea, and in part because study of renal function indicates that frequently following very active diuresis renal function is temporarily depressed. They are most efficient when given after a short period of digitalis therapy. In the patient with œdema of nephritic origin without cardiac insufficiency digitalis alone, however, in my experience produces no diuresis, and when followed by a diuretic drug little or no increased urine flow results.

References.

1. Christian and O'Hare: A Study of the Therapeutic Value of a Diuretic (Theobromine Sodium Salicylate or Diuretin) in Acute Experimental Nephritis, *Arch. of Int. Med.*, 1913, XI, 517.

2. Walker and Dawson: The Effect of Diuretic Drugs on the Life of Animals with Severe Acute Nephritis, *Arch. of Int. Med.*, 1913, XII, 171.

3. Fitz: The Immediate Effect of Repeated Doses of Theobromine Sodium Salicylate and Theocin on Renal Function in Acute Experimental Nephritis, *Arch. of Int. Med.*, 1914, XIII, 945.

4. Christian: The Effect of Theobromine Sodium Salicylate in Acute Experimental Nephritis as Measured by the Excretion of Phenolsulphonephthalein, *Arch. of Int. Med.*, 1914, XIV, 827.

5. Christian, Frothingham, O'Hare and Woods: Studies of Nephritis, *Am. Jour. of Med. Sc.*, 1915, CL, 655.

6. Christian: Some Phases of the Nephritis Problem, *Am. Jour. of Med. Sc.*, 1916, CLI, 625.

7. Christian: Some Studies of a Diuretic (Theocin), *Arch. of Int. Med.*, 1916, XVIII, 606.

8. Christian: A Consideration of the Clinical Classification of Nephritis, *Cleveland Medical Journal*, 1917, XVI, 223.

9. Christian: The Use of Tests of Renal Function in Cases of Nephritis, *Jour. of Urology* (to appear later).

THE USE OF RADIUM IN INTERNAL MEDICINE *

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When a new remedy is first introduced enthusiasts are inclined to magnify its virtues, if it has any. Then comes a period of reaction, when it is considered to possess nothing but vices. Finally the pendulum swings to the centre, and we arrive at the truth.

Radium has been used for therapeutic purposes for about a decade, so that it is now a good time to take stock. The results in dermatology and in surgery are well known to all. Superficial new growths are quickly destroyed, nævi disappear without a scar, fibroids rapidly diminish in size, keloids melt away; carcinomata and sarcomata are sometimes cured, often checked, and nearly always rendered painless. We have learned much about the more or less limited field in which we may expect good results. But when we come to deal with internal medicine our knowledge is not as well crystalized. The time which has elapsed since the first patients were treated is too short to speak of permanent cures, nevertheless, a short summary of the work that has been done will, I trust, be of some interest to the members of the profession.

Radium is applied to the human body in two ways, either as a salt of the metal arranged in a suitable instrument, or as radium emanations, administered intravenously or taken by mouth. There can be little doubt that some of the healing properties of the waters of certain health resorts are due in great measure to the radium content, which is always small and can never do any harm. When the application is made directly to the skin, great care must be taken to avoid burns, and this is usually done by interposing metal screens which shut off the destructive rays.

When we come to make a list of the diseases for which radium has been tried, we must begin with arterio-sclerosis, for this is the pathological process underlying a great many conditions. The measures which have already been advocated for it include practically the whole pharmacopœia, each with its band of enthusiasts, so that it is no matter of wonder to find radium in this list. The claims made for it are that the blood pressure is reduced, and the unpleasant symptoms ameliorated.

*Read at meeting of Ontario Medical Association, Toronto, June, 1917.

A careful survey of the literature would, however, lead one to the conclusion that radium, in the treatment of this condition, will never play more than a subsidiary part in the usual dietetic and hygienic measures.

In simple goitre, however, the changes brought about by the action of radium are very satisfactory. The gland decreases in size, the pressure symptoms disappear, and the cosmetic effects are pleasing. Even when the condition is due to an adenoma, some improvement is expected, in many cases a cure. One of the peculiar things noticed in the treatment of goitre of this form is that there is sometimes a latent period of perhaps weeks, after which the changes take place rapidly.

So many cases of improvement and cure have been recorded in exophthalmic goitre, that radium has now a prominent and fixed place in the treatment of this unfortunate condition. The results are satisfactory enough to warrant the hope that many patients may be saved from a critical operation. Fully 60 per cent. are either entirely cured or markedly benefitted, a result that is equal to any other method of treatment at our command. Furthermore, the relief is often permanent. Radium, when properly applied, will cause destruction of the blood vessels. This is probably the way in which the beneficent effects are produced in Graves' disease, the blood channels being obliterated as much as if the surgeon had tied the thyroid arteries.

But it is when we come to certain of the blood dyscrasias that the most remarkable effects of radium are to be seen. Since Turner first experimented with this element upon the enlarged spleen, many cases of splenomyelogenous leucæmia have been treated in this way with almost uniform success, as far as initiating some degree of a remission. In the thirty cases treated at the Mayo clinic during the past year, the reduction in the leucocyte count and in the size of the spleen was especially marked in about half of them. It is too much, however, to hope that the improvement will be permanent, nevertheless, we have in radium a therapeutic agent that comes nearer being a specific for these cases than anything else in our armamentarium.

The method of treatment most commonly used is that described by Ordway. The splenic area is mapped out into squares, and the radium properly protected, applied in rotation to each square, the total administration being governed by the condition of the patient. In this way the skin is less injured than it is when the X-rays are used.

In pernicious anæmia, too, some of the reported cases are little short of marvellous. Only comparatively few patients

have been treated thus far, but the success is so marked as to lead to the hope that remissions may be inaugurated at will.

The method of applying the radium is similar to that used in splenic leucæmia. Massive doses are applied over the ribs and sternum, which contain the red marrow most easily reached. The applicator is changed about to preserve the skin. Within a few days the blood-picture begins to show some improvement, the remission being well established by the end of the month.

In all these blood conditions, the course is steadily downwards, so that anything that checks it, even for a short time, is of the utmost value to the physician. They are all characterized by what might be called natural remissions, which often lead to confusion in the results of the treatment, but the effect of radium is so constant that one must consider something more than coincidence.

Another blood disease, in which amelioration is fairly certain with the application of radium, is polycythæmia. Although this dyscrasia is comparatively rare, the multiplicity of remedies which have been tried show how intractable the condition is. Ordway reports a case, treated with radium, which has shown a normal blood-picture for two years.

Lymphatic leucæmia has also yielded to the radium rays. Simpson reports a very interesting case of nearly three years' duration, steadily progressing downwards, in spite of treatment by benzol and X-ray. In less than a month after the application of radium to the involved areas (cervical and axillary glands), the white blood count fell from 113,000 per cm. to normal. At the same time the affected glands diminished markedly.

For the relief of pain in tabes, neuralgia, sciatica, lumbago and allied conditions, radium has a useful place, but its most brilliant results along this line are obtained in pruritis ani, usually so intractable. A small plaque applied to the affected area quickly produces a cessation of the intolerable symptoms fulfilling the Hippocratic requirements, *cito, tuto et jucunde*.

In conclusion, the clinical results which have been obtained in this small group of diseases belonging to the realm of internal medicine place radium beyond the category of a therapeutic luxury. Although cures cannot be promised in certain of these conditions, the symptoms are ameliorated and the patient is made more comfortable. Radium has the advantage of being applied in bed without any excitement or disturbance, in a perfectly definite dose, which can be repeated as often as necessary.

421 Bloor Street West, Toronto.

Reports of Societies

MINUTES OF THE ONTARIO MEDICAL ASSOCIATION MEETING

The thirty-seventh annual meeting was held in the Mining Building, University of Toronto,, on May 30th, 31st, and June 1st, 1917. The Committee of General Purposes met on the evening preceding (May 29th) and discussed fully the proposed by-laws and constitution. At 10 a.m. the President, Dr. A. Dalton Smith, took the chair at the Business Session. After the reading of the minutes, the following reports were received and adopted: Treasurer, Secretary, Arrangements, Papers and Business, Public Health, Necrology and Workmen's Compensation. The Committee on By-laws, and the Executive Committee were to report at the next Business Session.

In the Afternoon Session, Dr. James J. King, of New York, presented a paper on the Tonsillar Infections as a Source of Systematic Disease, and Dr. W. W. Chipman, of Montreal, read the address in Gynæcology.

The following were elected on the Nominating Committee: Drs. Mullin, Bingham, Cleland, Anderson, Cameron, Clarkson, Lusk, McGregor, Ferguson, Powell, Goldie, Rogers, Morton, Parry, Middleboro', Dalton Smith, Argue.

At 5 p.m. a short Business Session was held, the President in the Chair. Dr. G. S. Cameron presented the report of the committee on by-laws.

Moved by Cameron-Anderson that the committee be requested to continue their work and to bring in a report at the Annual Meeting of 1918.

Moved in amendment by Mullin-Marlow, that the committee continue their work, and that a special meeting of the Association be called on or before November 1st, to pass upon the provisional constitution. On the amendment being put, it was carried.

At the Evening Session, the President, Dr. A. Dalton Smith, presented his address, and Dr. Henry A. Christian, Boston, delivered the Address in Medicine.

The morning of Thursday was devoted to the meetings of Sections.

At the Afternoon Session, Dr. W. W. Babcock, of Philadelphia, delivered the Address in Surgery, and Dr. J. E. McKenty read a paper on Laryngectomy.

At the Business Session the Nominating Committee reported as follows: Next place of meeting, Hamilton; President, Jno. P. Morton; 1st Vice-President, G. Stewart Cameron; 2nd Vice-President, Jno. Ferguson; 3rd Vice-President, J. M. Rogers; 4th Vice-President, J. F. Argue; General Secretary, F. Arnold Clarkson; Assistant Secretary, F. C. Harrison; Treasurer, J. H. Elliott; Executive Committee, Jno. Sheahan, H. H. Beal; Representatives to the Canadian Medical Association, H. B. Anderson, D. J. Gibb Wishart, H. J. Hamilton.

The following were added to the committee: Credentials, J. R. Parry, Geo. A. Shannon; Public Health, H. W. Hill, A. J. McCauley, J. W. S. McCullough; Publication, E. E. King, G. W. Elliott, Jno. Ferguson; Ethics, W. H. B. Aikins, P. L. Scott.

The Treasurer's report and the report of the Executive were then received and adopted. The usual honoraria to the General Secretary ($200) and to the Assistant Secretary ($75) were passed.

Moved by Morton-Campbell, that the Ontario Government appoint a Royal Commission to make inquiry into the subject of the care of the Feebleminded and Insane in the Province of Ontario, to the end that more adequate means may be adopted for dealing with the problems of prevention and of scientific treatment of the Insane and Feebleminded. Carried.

Moved by King-Hamilton, that the President appoint a Committee to deal with the question of venereal disease. Carried.

Subsequently the President named E. E. King (convenor), Chas. Hair, H. J. Hamilton, A. Dalton Smith, H. S. Hutchison, J. G. Fitzgerald, R. W. Mann, J. P. Morton, G. S. Cameron, and E. R. Secord.

The President then installed the President-elect, J. P. Morton.

At 4.30 the President and Mrs. A. Dalton Smith held a reception in the Academy of Medicine.

At the Evening Session, two papers were presented, one by Dr. Nelson, and one by Prof. Sharpe, of New York.

Friday morning was devoted to Meetings of Sections.

Editorials

CANADIAN PUBLIC HEALTH ASSOCIATION

This is a comparatively new but at the same time very vigorous and useful association. As many of our readers know this association was organized in 1912, when the first meeting was held in Montreal. The generous public-spirited people of Montreal and the Province of Quebec generally supported that meeting very strongly. One of the most able and interesting addresses at the meeting was one delivered by His Royal Highness, the Duke of Connaught.

The next meeting was held in Regina, and was largely supported by the public of the West, including the Lieutenant-Governor of the Province, members of the government, heads of various municipalities and the Mayor and Council of Regina.

In 1914 it was expected that the meeting would be held at Port Arthur and Fort William. Great preparations were made for this meeting, but the war dislocated things to such an extent that the meeting was called off. In 1915 the Executive decided to hold a meeting, it being considered that the Association should not be allowed to die or even go to sleep because of the war. The meeting was held in Toronto on rather short notice, and was only fairly successful.

In 1916 the Annual Meeting was held at Quebec,

and the authorities of both the Province and the City gave the members a royal reception which will never be forgotten by those present.

The next Meeting will be held in Ottawa, September 27, 28, 1917, under the Presidency of our good friend Dr. Page of Quebec. The meeting of the Canadian Association for the Prevention of Tuberculosis will be held in Ottawa, September 26th, that is, a day before the opening of the Public Health Meeting.

TYPHOID FEVER AND THE MILK SUPPLY

We learn from the lay press of Toronto that in three weeks—before May 17th—the Town of Orillia with a population of about 8,000 had 140 cases of typhoid fever. During the same period Toronto with a population of half a million had only one case. *The Daily Star asks* "Why is Orillia thus afflicted, while Toronto escapes?" Orillia is a beautiful, healthy and progressive town, and looks well after its water supply. The cause was unknown for some time, but investigation showed that the milk inspection was faulty. There was typhoid fever on a certain farm, and from that farm the disease went to Orillia causing a very serious and at the same time preventable epidemic. We can hardly say that Toronto will always go scot free, but so long as our present M. O. H. has charge of health matters it is likely to remain free from any such scourge. The

following precautions are taken; his instructors visit the farms from which the City's milk supply is drawn; they see that the milk cans, stables and the cows are kept clean; also clean methods of milking must be employed. When the milk reaches Toronto it is analyzed and strained through cotton discs, then the milk is pasteurized.

It is believed by those competent to judge that pasteurization alone (even though that is not quite enough) would have saved Orillia.

SOLDIERS' HOSPITAL AT WHITBY

Some of the invalided soldiers in the excellent Hospital at Whitby feel somewhat lonely at times and certain complaints have been made in that regard. The majority, however, appear to be well satisfied, and have sent a letter to the Officer in Command, which was signed by a large number of men. In that letter they expressed their regret that the few complaints made should have been given the publicity which they did not deserve. The officers have done all in their power to make the Home at Whitby attractive and comfortable. They point out that in this convalescent home they have fresh air, wholesome exercises and good food. They say they do not claim that Whitby has the attractions of the City of Toronto, but they do claim that in the object for which they are there, namely, the improvement of their health, Whitby is superior to Toronto.

CANADIAN MEDICAL ASSOCIATION

The meeting of the Association in Montreal, June 13-15, was highly successful in every way. One of the most enjoyable functions in connection with the meeting was the annual dinner on the evening of June 14th. During the whole meeting, Dr. Blackader, as Chairman at the General Sessions, showed both ability and tact.

The literary work was exceedingly good throughout the whole meeting, and far above the average of the ordinary meetings for the last few years.

The Presidential address was admirable in every way, and the Addresses in Medicine, Surgery, and Public Health were excellent. The Address in Medicine, delivered by Dr. Janeway, of Johns Hopkins Hospital, was considered one of the best ever given before any medical assemblage in North America.

The next meeting will be held in Winnipeg.

ONTARIO MEDICAL ASSOCIATION

The thirty-seventh annual meeting of this Association was held May 30th to June 1st and was very successful in all respects. This was somewhat remarkable when we consider that the President lived in Mitchell quite a long distance from Toronto, and that the only Toronto Vice-President, Dr. Clarence Starr, was overseas during the whole year. We desire to congratulate the President Dr. A. Dalton

Smith for his admirable work in the Chair. He was an excellent presiding officer.

We are glad for many reasons that the next meeting will be held in Hamilton. The marvellous success of the last meeting held in that City in 1908 filled everyone with admiration, and also some amazement. It was not expected that the meeting would be a record one in all respects, but such it was. As we have before stated in this Journal the generosity of the people of Hamilton, lay and professional, in the entertainment of their guests surpassed everything we had previously known in Ontario. If Hamilton can do nearly so well in 1918 as she did in 1908 all the members will be quite satisfied.

HART HOUSE FOR RE-EDUCATION

Through the kindness of the Trustees of the Massey Estate, Hart House has been placed at the disposal of the Military Hospitals Commission. The commission is thus enabled to undertake the work of re-educating men suffering from physical and mental disabilities. Hart House will be used in conjunction with the Orthopædic Hospital at North Toronto, and the commission has arranged transportation facilities for moving men from building to building as may be found necessary.

Hart House was originally designed as a gift from the Massey Estate to the University of Toronto for the use of the entire male student body.

MOUNT HAMILTON HOSPITAL

The opening of the new Mount Hamilton Hospital in the City of Hamilton by the Duke of Devonshire, May 19th, was a very interesting function. His Excellency commented upon the site that had been chosen, and stated that any city should be proud to have the honor of erecting such an institution. He then turned to Mr. Pratt, Chairman of the Hospital Board, and said, "I now declare this magnificent Institution opened, and take great pleasure in handing you the key."

EDITORIAL NOTES

The military folk are again active at Camp Borden. They commenced the anti-typhoid inoculation, June 6th; then the men were taken in charge by the Army Dental Corps, whose members proceeded to "put their teeth in order."

We understand that the sanitary conditions in the camp are good in all respects, and are told there is not so much dust as there was last year.

Six years ago Mr. J. L. Englehart, Chairman of the Temiskaming and N. O. Railway Company, presented his residence and surrounding grounds to the Town of Petrolea for hospital purposes, the hospital to be named the Charlotte Eleanor Englehart Hospital. On May 30th he donated $10,000 for the purpose of adding a Maternity Annex to this hospital.

We understand there were about 450 patients at the Base Hospital on Gerrard Street, Toronto, in the middle of June.

AMERICAN RADIUM SOCIETY

The second annual meeting of the American Radium Society was held at the Hotel Vanderbilt, in New York, June 4th, under the presidency of Dr. W. H. B. Aikins, of Toronto. Very great interest was manifested, and the sessions were largely attended. Dr. Clark, of Philadelphia, delivered an able address on Radium in Gynæcology; Dr. Frank Simpson, of Chicago, one on Radium in Dermatology, and Dr. Henry Schmitz, also of Chicago, described the Histological Changes which took place as a Result of Exposure to Radium; Dr. Viol, of Pittsburg, dealt with the Physics of this Metal and Special Technique. Dr. Hugh Young, of Baltimore, was to have taken up the question of the Value of Radium in Cancer of the Bladder and Prostate, but as he was on his way to France, Dr. Winfield Ayres, of New York, ably discussed this subject. Dr. Lee, of Rochester, N.Y., dealt with the Value of Radium as an Aid in General Surgical Practice.

The next meeting is to be held on the day preceding the meeting of the American Medical Association.

The following will hold office: President, Dr. Lee, Rochester; Vice-President, Dr. Bissell, New York; Secretary, Dr. Pancoast, Philadelphia; Treasurer, Dr. Loucks, Detroit; Executive Committee, Dr. W. H. B. Aikins, Dr. Simpson and Dr. Bissell.

MIDDLESEX COUNTY MEDICAL ASSOCIATION

At a meeting held in the Institute of Public Health, London, on May 22nd, 1917, the Middlesex County Medical Association was organized. It was unanimously decided to affiliate with the provincial Association, and Dr. F. H. Mitchell, of Kilworth, was elected delegate to the meeting of that body. Drs. McLachlan, of Glencoe, and W. H. Woods, of Mount Brydges, were elected provisional chairman and provisional secretary, respectively.

News Items

Free Diagnosis of Venereal Diseases

Dr. J. W. S. McCullough, of the Provincial Board of Health, Ontario, announces that on and after the 20th instant, facilities will be provided in the Laboratories of the Provincial Board of Health, at Toronto, Kingston, and London, for the free diagnosis of Typhoid fever, Diphtheria, Tuberculosis, Venereal Diseases. Outfits for taking specimens will be supplied to all physicians for this purpose. These outfits may be procured from the Laboratory of the Board, Number 5 Queen's Park, or from the Board's Branch Laboratory Queen's University, Kingston, or the Board's Branch Laboratory, Ottaway Avenue and Waterloo Street, London, Ontario.

Treatment of Returned Invalid Soldiers

There is already much evidence and probably more to come to prove that the treatment of returned wounded soldiers has developed and will continue to develop in the future many complex problems. At present most of the wounded, including the amputation cases are in Toronto. It is said that all the limb factories are in the same place, but we understand that a large factory is being constructed in Winnipeg. Nearly all the patients sent to Winnipeg are in a convalescent stage, and the treatment of those on the road to recovery is, we are told, in many cases extremely perplexing.

Two nurses, Mrs. Edith Ayers, Chicago, and Miss Burnett Woods, Evanston, Ill., were killed on the American Steamer Mongolia, when a portion of a bursting shell struck them while they were watching the American gun crew at practice at sea about May 20th. They had been in the Red Cross service three years and were on their way overseas when the accident occurred.

Another sad tragedy was announced in the death of Jack Lombard Hart, only son of Dr. J. W. Hart. of Huntsville. who was killed in action, somewhere in France, May 8th.

Dr. W. E. Ord (Lieutenant, R.A.M.C.) has been decorated with the French Cross of War.

Capt. Lewis E. Clarke, M.D., a graduate of McGill, and a practitioner in Vancouver, was killed in action, June 20th, aged 29.

We have to announce with deep regret the death of Mrs. Morgan, wife of Dr. A. E. Morgan, Lansdowne Avenue, Toronto, which occurred May 25th.

Mrs. Catherine Fish, mother of Dr. W. A. Fish, 678 Broadview Avenue, Toronto, died in Winnipeg, June 10th. The remains were brought to Toronto, and buried in Mount Pleasant Cemetery, June 15th.

Flt. Lieut. W. Eric Lockhart, a nephew of Dr. John Hunter, of Toronto, was killed in action, June 12th, while serving in France with the Royal Flying Corps. He was a 4th-year student of the S.P.S., Toronto, when he enlisted in 1915 with the Canadian Engineers. After going overseas he was transferred to the Flying Corps.

Dr. Thos S. Cullen, of Baltimore, has expressed a desire to go to the war, but the authorities of Johns Hopkins Hospital have refused permission for the time being, because he has charge of the department this year, as Dr. Kelly is taking a year off.

Dr. Michael Steele, M.P. for South Perth, again introduced in the House of Commons the question of establishing a Federal Department of Public Health. Of course every doctor in Canada favors such an establishment, and has done so for over twenty years, but the unanimous voice of the medical profession is a very light weight in the Canadian House of Commons.

American doctors with full staffs of nurses and helping men have taken over six British Field Hospitals in France within the last few weeks. Colonel Goodwin, R.A.M.C., was travelling through the United States during the month of June asking for medical volunteers. He says many will be required in addition to the 20,000 who are expected to work in the American Army. Medical help is wanted on all five fronts. There are now about 300,000 hospital beds in Great Britain, 27,000 in Malta, about 250,000 in Italy, and large unknown numbers in Egypt, Mesopotamia, India, Roumania and Russia.

Members of the Sir William Osler, I.O.D.E. Chapter, of which Dr. Caroline Brown is Regent, have rented a piano for the summer, and sent it to the Base Hospital, Gerrard Street, Toronto, for the use of convalescent patients.

A handsome Convalescent Home for the members of the Royal Flying Corps has been donated to the Canadian Aviation Aid Club by a friend who wishes his name withheld. It will be known as "Long Wood" and is near Stop 26 on Yonge Street. The building has been fitted up with 25 cots. It is surrounded by 13 acres of land, much of it being timber.

The Military Hospitals Commission has received an offer from Columbia University War Hospital, New York City, to care for 500 Canadian wounded, which the Hospital will be prepared to receive in July. At the time of writing it is not known whether the offer will be accepted, as our hospitals at present available for the returned wounded are not all filled.

The Council of the Ontario College of Pharmacy has recently told druggists that they could aid the police authorities in stopping the illicit sale of narcotics in the Province. At a meeting of the Council, held June 8th, it was decided that in future the offence of selling narcotics by druggists will be punishable by immediate cancellation of the diploma of the offending druggist.

We have to announce another of the sad tragedies of the war, Capt. Arthur H. Ardagh, only son of Dr. Arthur E. Ardagh, of Orillia, was killed in action somewhere in France, May 10th: He went overseas with the 35th Battalion with the rank of captain in August, 1916. He reverted to the rank of lieutenant in order to get to the front. He was in the fighting line from January up to the time of his death, going through several severe actions at Ypres, the Somme and Vimy Ridge.

Sir William Macdonald, Chancellor of McGill University, died June 9th, aged 86. During his life his dônations to McGill University totaled over $10,000,000. By his will the following bequests were made to various faculties of McGill University: Macdonald College, $1,000,000; Faculty of Medicine, $500,000; Conservatory of Music, $300,000; Endowment of a travelling scholarship in the Faculty of Law, $20,000, and to the following Institutions in which McGill Medical Faculty is interested: Montreal General Hospital, $500,000; Montreal Maternity Hospital, $100,000; Crematory, $100,000.

Personals

Dr. Ernest Cullen, of Detroit, is a Captain in the Harvard Hospital Unit, and has probably already reached England.

Colonel Charles Alfred Hodgetts, M.D., of Ottawa, has been made Companion of St. Michael and St. George.

Col. Irving Cameron, of Toronto, visited his daughter and brother in Ottawa, early in June.

Lt.-Col. Biggar was made O.C. of a new Canadian Military Hospital, established near Liverpool, in May.

Dr. D. D. Ellis, of Fleming, Sask., Grand Master Orange Grand Lodge, British North America, visited Toronto, May 23rd.

According to a report received June 6th, Lieut. S. H. Peppler, son of Dr. Peppler, of Toronto, was slowly recovering from the effects of an injury by shrapnel, on May 3rd.

Col. H. S. Birkett, C.B., M.D., of Montreal, has been placed on the editorial committee of Laryngology, Rhinology and Otology. He is the first Canadian to receive this distinction.

Dr. Andrew Moorhead, F.R.C.S., Eng., of Toronto, was married to Miss Olive Hazel Umphrey, of Toronto, on June 5th. The bride is a niece of Drs. Chas. and A. Orr Hastings, and a cousin of Dr. Elgin Hastings.

Nursing Sister Madeline Jaffray, of Galt, was wounded, in France, with shrapnel in the left foot, June 5th. She went over with the First Contingent, and has seen long service with a French Nursing Corps.

Dr. A. J. Fraleigh, of Broadview Avenue, spent the greater portion of the winter on the Pacific Coast, and on his way home he spent two weeks at the Mayo Clinic in Rochester, Minn., and a week at the Oeschner Clinic, Chicago.

Miss Laura Gamble and Miss Lizzie McEachern, Graduated Nurses of the Toronto General Hospital, were awarded the Royal Red Cross of the second class, and decorated by His Majesty, the King, in London, June 6th.

Dr. Clarence P. Thomas, of New York, was married, June 9th, to Miss Edith Irene Doolittle, daughter of Dr. Perry E. Doolittle, of Toronto. The marriage was to have taken place in Toronto, July 2nd, but owing to Dr. Thomas being suddenly called for military service, the wedding took place in New York.

Capt. Frank McLay, R.A.M.C., of Grimsby, son of Dr. A. M. McLay, of Woodstock, visited his brother, Prof. W. S. McLay, of McMaster University, in the latter part of May. Capt. McLay was in Canada on leave after 21 months of active service. After two weeks in Canada he returned to the front.

Dr. Thos. Futcher, of Johns Hopkins Hospital, Baltimore, visited his relatives in St. Thomas, Ont., June 17th. After staying there a few days he left for England, where he has been given an important position in the C.A.M.C. He will act mostly in an advisory capacity in conjunction with Sir William Osler.

Surgeon-General Carleton Jones has returned to England, and reached London, June 12th. The nature of his duties was not announced, but it was stated that for the time being he had Headquarters in the Offices of the Director of Medical Services, Great Britain.

A report was received by Dr. Amys, M.O.H., Peterborough, from Toronto, June 12th, that the dog that had bitten the young girl, Miss Doris Pemberton, had rabies, thus confirming the diagnosis previously made by Dr. Johnston. Miss Pemberton was at once sent to Toronto for Pasteur treatment.

Surgeon Eugene Fiset, D.S.O., formerly Deputy Minister of Militia, is now Sir Eugene. He was born in Rimouski, Que., 1874, of Catholic parents, and was educated at Rimouski College and Laval University. He took a prominent part in the South African War, received the D.S.O. in 1903 and C.M.G. in 1914.

Lt.-Col. A. J. Mackenzie, formerly a partner of the late Dr. William Oldright, of Toronto, was appointed C.O., Princess Patricia's Red Cross Hospital, London, June 8th. Before that he was for a short time in command of the Moore Barracks Hospital, Shorncliffe. He went overseas as Medical Officer of a Toronto Highland Battalion of the First Contingent.

Obituary

COL. FRANK A. SYMMONS, M.D.

Dr. Frank A. Symmons, A.D.M.S., was killed somewhere in France on or about May 8th. He was well known in Nova Scotia, where he practised medicine for some years. He went through the South African War, and was present at the Relief of Ladysmith.

LIEUT.-COL. S. W. HEWETSON, M.D.

Lieut.-Col. Samuel W. Hewetson, C.A.M.C., who before the war was practising in Alberta, went overseas with the First Contingent. He died March 6th at the Royal Free Hospital, London, after an operation. He graduated from McGill in 1893, and was in the 49th year of his age.

DR. THOMAS SPARKS

Dr. Thomas Sparks, of St. Mary's, died April 10th, after an illness of some years. He graduated from the University of Toronto in 1867, and practised for some years at Lakeside. He went to St. Mary's about 25 years ago. His son, Capt. L. Sparks, C.A.M.C., of London, Ont., is on active service.

JAMES RUSSELL, M.D.

One of Canada's greatest physicians, Dr. James Russell, of Hamilton, died May 31st, in his 74th year, after an illness of about six months. He was born in Scotland and came to Canada in 1856. He received his medical education in the Toronto School of Medicine, and the Long Island Cottage Hospital Brooklyn, N. Y. He graduated from the latter In-

stitution in 1868, and from the Victoria University, Ontario, in 1869. Immediately after graduating he practised in Binbrook, and soon attained success. He took a prominent part in public affairs, and was for a time Reeve of the municipality. He was also for a time President of the South Wentworth Reform Association. He was one of the territorial representatives of the Ontario Medical Council from 1885 to 1890. He was appointed Superintendent of the Hamilton Hospital for Insane in 1887 and retained that office until 1906 when he resigned. While connected with that institution he was recognized both in Canada and the United States as one of the most able alienists in North America. He was for several years a member of the American Medical Physiological Society, and read a number of papers before that Association, which were very highly commended. When he received his position in the Asylum, as it was then designated, the *Toronto Globe* in a very complimentary article stated that he was "a man of marked ability." Apart from his great ability there were many sides to his character, all of which were admirable. He was in all respects a manly man, and at the same time a very lovable one. For many years he was one of the most popular men in Canada, and also in many parts of the United States.

He was a keen sportsman in the higher or British sense of the word. He was especially well known in connection with curling and bowling on the green. He was a member of the bowling team that visited Great Britain in 1904, and captain of the team that went over in 1908.

The writer had the good fortune to be a very intimate friend of Dr. Russell's, and he considered that friendship one of the sweetest things in his life.

Our heartfelt sympathy goes out to the bereaved family, especially to Mrs. Russell, Miss Elizabeth Russell, with the Red Cross overseas—who was recently decorated with the Royal Red Cross for her services—and John ("Jack") the well-known artist.

Selected Article

THE CAMPAIGN AGAINST VENEREAL DISEASE

Sir William Osler's Oration.

On May 14th the Annual Lettsomian Oration of the Medical Society of London was delivered by Sir William Osler on "The Campaign Against Venereal Disease." The orator said that Nature in the form of disease was more fatal to man than man with his weapons. The needless deaths of peace far exceeded those of the most disastrous wars. More people died of plague in two years in India than had been killed on both sides since the great war began. In 1915, while nine of our soldiers abroad died every hour to save their country, twelve babies died at home in the same time to the scandal of their country.

The story of the conquest of the great infections was the brightest single chapter in the history of science. There was a fly in the amber, of course, as one looked in two directions—towards cancer and towards venereal disease.

Fallacy of Venereal Statistics.

Among infections syphilis and gonorrhœa stood alone. Against all other diseases man waged keen warfare. They presented the remarkable and subtle combination of man and Nature in an incessant and successful propaganda against the health of mankind.

The first thing to arrest attention in the Registrar-General's report for 1915 was the absence of all reference to venereal disease in the "Review of the Vital Statistics for the Year 1915," by Dr. T. H. C. Stevenson. Of eighteen causes of death specially discussed, all but three belonged to the infections, of which tuberculosis and pneumonia headed the list—but not a word about syphilis. Syphilis had been, and remained, the despair of the statistician. Trustworthy data were not forthcoming. Even in death a stigma was associated with it, and the returns were everywhere but under the special caption of the disease itself. In a list of eleven causes of infant mortality during the first year syphilis was not mentioned. Syphilis

was stated to have been responsible for 1,885 deaths at all ages, and other venereal disease for 61. Of the 1,885, 1,162 were under a year, 1,277 under five years; of the ten best killers among the infections syphilis came last. Content at this stage, the superficial reader would have a very erroneous idea of the position of venereal disease in the nation's life.

The Case Against the Gonococcus.

The gonococcus was not a great destroyer of life, but was the greatest known preventer of life; one of its cruel properties was to sterilize a very considerable proportion of its hosts. As high as 25 per cent. of the major operations at gynæcological clinics and hospitals for diseases of women might be for gonorrhœal complications, which were among the commonest sources of chronic ill-health. Conservative estimate placed the percentage of sterility in women due to gonorrhœa at 50. A large majority were innocent victims of infection by husbands who thought themselves free from all traces of what they regarded as a harmless indiscretion of youth, and who could have been cured under a proper system of control and treatment. The complicating epididymitis in the male was another common cause of sterility. One recalled the dictum of Noegerrath, "90 per cent. of sterile women have husbands who have had gonorrhœa."

From the standpoint of race conservation gonorrhœa was a disease of the very first rank, and cost the country annually thousands of lives. With 30 to 40 per cent. of all cases of congenital blindness, with the chronic pelvic mischief in women, and with the unhappiness of sterile marriages—with these and many minor ailments scored up against it, we might say that while not a killer, as a misery producer Neisser's coccus was king among the germs.

The Heritage of Syphilis.

The frequency of transmission of the spirochæte of syphilis from parent to child stood out less as biological peculiarity than as a fact of supreme importance in the national health. The spirochæte might kill the child *in utero*, a few days after birth, or within the first two years of life, or the blighted survivor might be subject to innumerable maladies.

The stillborn were at last to be numbered. Until now they had remained the "hidden untimely births," to use the language

of Job. Sir Arthur Newsholme estimated them at close upon 100,000. What percentage of these deaths were spirochætal we did not know, but we knew that syphilis was, perhaps, the most common cause of abortion, and, from examinations made at large maternity hospitals, more than 25 per cent. of the stillborn had been found infected. Rejecting the larger estimates, the stillbirths due to syphilis might be put at, say, 20,000 for the year 1915. Of the first 10,000 cases at the special clinic of the Johns Hopkins Hospital there were 705 fœtal deaths—that is, from the seventh month onward. In all cases the placenta was examined as well as the fetus. "By far and away the most common etiological factor in the production of death in the fetus is syphilis" was the conclusion; it was responsible for 26.4 per cent. in the series. In addition, at least 53 of the 127 macerated fetuses were probably syphilitic, though this could not be determined microscopically.

In 1915, of 800,000 children born, 90,000 died within the first year. If this were added to the intrauterine deaths it made stock-raising for the human animal a very poor business. About one-fifth of these died within the first week, and one-fourth within the first month. Ten causes were mentioned, but again the interest of the list centred in what was not there—syphilis was not even mentioned! When we turned to the total deaths from syphilis, then we did get light, as among the 1,885 deaths 1,162 were under one year, 1,277 under five years, but these figures were far below the mark. Careful work was in progress to determine the number of deaths within the first year from syphilis, and we should not be far wrong in placing the figure at between 15,000 and 20,000.

Latent Syphilis.

The second point in the biology of the spirochæte was a peculiarity it shared with many other parasites of resting dormant in the body for years. Its capacity to work evil was not to be measured by years. Since Schaudinn's great discovery there was a sharper point to Sigmund's aphorism, "Syphilis is the worm that never dieth." *Venus impura* was a hard mistress—Venus of the long arm she should be called—as ten, twenty, thirty, even forty, years from the date of infection the book bills were rendered, and she wrung the uttermost farthing out of her poor victims.

No insurance company to-day would take a man who had a positive Wassermann reaction. A good test of the importance

of a disease was to take the thirty-seven volumes of the two series of the Index Catalogue of the Surgeon-General's Library, Washington, in which was indexed practically all medical literature between 1884 and 1917. In vol. xvii of the second series, issued in 1912, there were 207 double-columned pages of reference, against 117 pages in vol. xiv of the first series in 1893. No other single disease except tuberculosis had so much space devoted to it. The improved technique by which the spirochæte was demonstrated in the tissues, and the serum reactions had opened a new chapter in our knowledge of the prevalence of the disease. The profession had read it with amazement, the sanitary authorities with bewilderment, but, best of all, the public was actually reading the chapter in the open.

The Statistics Unravelled.

From the Registrar-General's report, of the 562,000 deaths in 1915, about 58,000 were due to disease of the nervous system. Two of these needed no discussion; locomotor ataxia and general paralysis *were* syphilis, and accounted for 735 and 2,263 deaths respectively. A certain number of cases classed under meningitis were syphilitic. After locomotor ataxia came "other diseases of the spinal cord," 2,846 deaths, a larger proportion of them in the fourth to the sixth decades. Any neurologist would say that a reasonable estimate would ascribe at least one half of these to syphilis—say 1,500. By far the largest single cause was cerebral hæmorrhage, 25,423—a majority of the deaths occurring after 50, beyond which age it was the privilege of any man to rupture a blood vessel in his brain without suspicion; 3,713 of these deaths were between the ages of 25 and 50, of which 3,400 could be claimed as due to syphilis. There were 1,472 returns under the caption of "softening of the brain," and who could deny 500 of these as syphilitic? The "paralyses" without specified cause—2,983 cases—was a hopeless section, but as more than two-thirds were hemiplegia we could add at least another 500. That a certain proportion of other forms of mental alienation—1,100 deaths—were cases of general paralysis of the insane was very probable. From epilepsy, infantile convulsions, and "other diseases of the nervous system" which mount up to about 15,000, we could claim for syphilis 2,000 at least. This gave a total from this section of about 10,000 deaths in which syphilis was the probable cause.

The spirochæte attached itself to the vascular system in preference to all other parts. Aneurysm and the aortitis on which it depended were usually spirochætal. Between the twenty-fifth and the fifty-fifth years the cases were always spirochætal. Of the 1,141 deaths we could put down 1,000 to syphilis. There was a terrible bill opposite organic disease of the heart—56,000 deaths. About 17,000 of these were between the ages of 30 and 55, and a majority of these were in men. We should be safe in taking one-third of the cases between 30 and 55—say 5,000 at least—and we might take an equal number from the 10,000 dead of diseases of the arteries, atheroma, and aneurysm. A low estimate would put the cardio-vascular deaths due to syphilis at above 10,000.

It was unnecessary to bring in the comparatively small number contributed to other organs. We had enough to put the grand total of the ravages of the *Spirochæta pallida* above 60,000, and to move syphilis from the tenth place in the Registrar-General's report to where it belonged—*at the top, an easy first among the infections.*

In all parts of the world investigations were in progress dealing with the incidence of syphilis in ordinary hospital work. Dr. Warthen investigated the tissues in a series of consecutive necropsies with the most scrupulous care to determine the existence of the spirochæte. One-third of the autopsies in adults showed its presence somewhere in the organs. Of these 41 cases, only 11 were known to have had syphilis, 5 had active lesions in the nervous system, and 25 had shown no clinical changes suggestive of syphilis. In 36 there were syphilitic lesions in the heart, 32 in the aorta, 31 in the testicles, 4 in the liver, and 6 in the adrenals. He concluded that interstitial myocarditis, aortitis, and fibrous orchitis formed a triad distinctively syphilitic. After quoting other investigations, the orator said that modern researches led to three conclusions—first, that there is an immense body of latent syphilis in the community; secondly, that a very large number of persons have not been thoroughly treated; and, thirdly, that to the enormous groups of cerebro-spinal and cardio-vascular deaths syphilis is an all-important contributor.

The Dawn of Action.

Centuries of silence had made venereal disease taboo. The beginning of the twentieth century saw us in a condition of hopeless apathy. Within a decade what a changed attitude

in profession and public! The Royal Commission appointed in 1913 gave practical expression to a realization of the importance of the problem by the public. Best of all, Lord Sydenham's report had not been sterile. An outcome of the work of the Commission was the founding in 1914 of the National Council for Combating Venereal Diseases, the primary function of which was educational. The work of the Eugenic Education Society had been most helpful. The outset of the great war had stimulated, not retarded, the plan of campaign. War meant an enormous increase of the number of infections. The last quoted figures for the British Army at home were 71,000 cases of gonorrhœa, 21,000 cases of syphilis, and 6,000 cases of soft chancre. In the Canadian Army there had been enough cases of venereal disease to stir public opinion in the Dominion to boiling point.

These various agencies had at last the desired effect. The Government felt that opinion in the country was strong enough to act on the advice of the Commission, and hand over the venereal problem to the public health authorities, represented by the Local Government Board. Legislation had been enacted to fight the enemy in a settled plan at many centres under its control. It was a new departure to deal with an individual disease in this way. The word "may" instead of "shall" in the Tuberculosis Act gave us an ineffective guerilla warfare of local bodies instead of a Kitchener and a general staff. The Government made no mistake this time, and all over the country the clinics were in course of formation. No more hopeful legislation had ever been enacted than the establishment of those venereal clinics. But let the people and their representatives realize that they were dealing with the subtlest foe of humanity and the greatest sanitary problem which confronted civilization.

Organization of the Campaign.

A general staff, controlling the campaign, would work from the Local Government Board (or before long, he hoped, from a Ministry of Health), with laboratory, statistical, and several service departments, a publicity bureau and a library. Already the Commission had opened the doors of the general hospitals to these victims. The profession welcomed the scheme from the educational side, as there would be within easy reach opportunities for the study of all aspects of both disorders, and from the practical side they would be able to bring their patients

freely for special treatment, for consultation and for the laboratory tests. There would, he hoped, be at each centre lectures and demonstrations. A sympathetic and loyal feeling on the part of the practitioners in each district was really essential to the success of the work. Between the clinical and the laboratory side there would be enough at each clinic to occupy a large part of the time of a male or female doctor, who would, he trusted, become the skilled advisers of the profession and of the public in each district. These positions should be made sufficiently attractive to catch the very best, and he was sure the hospital authorities would welcome them as members of the staff. A great missionary field would be opened to women doctors, who should do the work among their own sex at the clinic. Social workers of the right sort with the right spirit would do much to make the clinics known and appreciated. The National Council could supervise this work, which should be done by carefully selected volunteers.

The clinic should be the centre in each district of an active educational propaganda, which should be stimulated and planned by the general staff, and not left to the timid discretion of local authorities. By meetings, literature, placards—in every legitimate way—a knowledge of the dangers of venereal disease should be distributed, and the importance of early and thorough treatment insistd upon.

Compulsion or Persuasion?

For any legislation to be successful the people must be prepared. We were committed to a campaign of education and an elaborate scheme of treatment. Two circumstances made it probable that these measures would not suffice to reach the enemy. So deep was the stigma associated with the disease that patients avoided hospital and even their family doctors. To be successful in any fight the primary essential was to know where the enemy was placed. Realizing as fully as any one the strong arguments against notification, the gravity of the situation overweighed with him all private considerations, and he felt sure that within a year we should be ready for the change. It worked well in the Scandinavian countries, and the results from those Australian dominions in which it had been introduced would be interesting.

The other point really more serious was also connected with notification. Both syphilis and gonorrhœa required protracted treatment, and the primary symptoms were often so slight that

it was impossible to get patients to continue a course of medication lasting a year or more. Reports from a Boston hospital showed that 28 per cent. of the patients did not return, and to a New York venereal clinic 29 per cent. of the syphilitics came but once. To be successful in this fight we must have control of the patients—the treatment must be compulsory; it was so in the army. If the House of Commons represented outside opinion, the public was a long way from appreciating the appalling risks they ran. The Government was committed, for a time at least, to a policy of persuasion, feeling that notification and compulsory treatment were too far in advance of public opinion.

For the first time in history the outlook was bright. The public was at last awake to the necessity of an educational campaign. That the preaching of chastity appeared a ghastly failure in face of the record of 800,000 fresh cases annually in this Christian kingdom was no reason why the earnest appeal for personal purity should not take the first place in the educational campaign.

That the State had at last intervened was another ground for hope, and most hopeful of all was the changed heart of the people. At last the sinner was to receive Christian treatment. —*B. M. J.*

Important Point

The doctor's wife had advertised for a girl to do housework and was showing an applicant over the house. She had been very liberal in her promises of privileges, and it looked as though the two were going to come to an agreement, when the girl suddenly asked:

"Do you do your own stretchin'?"

"Do we do our own what?" asked the puzzled mistress.

"Stretchin'," repeated the girl. "Do you put all the food on the table and stretch for it, or do I have to shuffle it around?" —*N. Y. Times.*

The Warm Weather Dietary

should be as free as possible from excessive heat-making material, yet contain the necessary protein and carbohydrates to insure physiological tissue-repair and maintain normal body energy.

Without discussing here the sources of protein—animal and vegetable—there seems to be a growing sentiment, among physicians who realize the importance of dietetic as well as therapeutic measures, in favor of vegetable protein, especially during the summer months.

To start the day well, a warm weather breakfast which includes a dish of **Grape-Nuts** and cream (slowly and thoroughly masticated) supplies energy for the forenoon, and the individual will have an appetite for the usual noontime meal.

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Selections

The Eye and its Neighbors

Though certain enthusiastic supporters of the focal infection theory may at times go to extremes in their zeal to prove a point, the fact remains and seems to be gathering strength that focal infection is an established phenomenon to be reckoned with in a great many pathological conditions as regards both ætiology and treatment. This theory is gradually leading to a change of views in the causation and therapy of a large class of ocular affections.

The proximity of the eye to the accessory sinuses and to the nose proper, and their close intercommunication through the blood vessels, lymphatics, and the nerves, serve as causes for the extension of diseased processes from one organ to another. Even the comparatively distant adenoids have been very properly accused of causing epiphora through abolition of nasal breathing, thus preventing the physiological evaporation of fluids from the nasal chambers. Adenoids play an important role in the ætiology of conjunctivitis and keratitis of phlyctenular orgin, as their removal seems to assist greatly in the cure of these conditions.

F. Stauffer (*Annals of Ophthalmology*, January, 1917) gives a formidable list of eye diseases which he believes are caused by focal infection from the nost and throat, *viz.*: "phlyctenular keratitis and conjunctivitis, sclerosing, and interstitial keratitis, scleritis and episcleritis, iritis, uveitis, choroiditis and retrobulbar neuritis, and last but not least, reflex asthenopia." Though this may seem to drive the point a trifle too far, there is no doubt that a careful and painstaking search will establish a causative relation between most of these conditions and the nearest focal infection either in the nose, especially in the sinuses, or in the mouth and throat. Reflex asthenopia claims our special attention, by reason of its frequent occurrence, and the brilliant results obtained when recognized and properly treated. We have all seen patients presenting symptoms of "pain in the eyes," such as headache, blurred vision, inability to concentrate the mind, and what not. These are usually treated symptomatically but ineffectually by the family physician, until referred to an ophthalmologist, who finds some refractive error and corrects it with glasses. These, how-

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ever, afford but temporary relief, and eventually the patient is taken in hand by the rhinologist, who gives him permanent relief by correcting a deflected septum, an hypertrophied turbinate that may be pressing on the latter, or treating a chronic sinus condition.

The invasion of the nasal inflammation or infection into the eye is effected primarily by direct continuity of the epithelium of the nasal mucous membrane to the conjunctiva. A well-known example of this is acute coryza, which invariably causes profuse epiphora, or, better still, the disturbance of the conducting apparatus of the tears by obstruction of the lacrymal duct, which is almost always due to diseases of the nasal mucous membranes. Influenza and diphtheria, by extending through the lacrymal duct, invade the conjunctiva of the eye frequently (Weeks). Again, the invasion may be effected through the absorption into the general circulation of bacterial toxins, and, third, through disturbances of the vasomotor balance, as by a mechanical reflex irritation from nasal deformities or pressure. Dental diseases, such as pyorrhœa alveolaris, alveolar abscess, and the like, are held responsible for a large class of ocular infections as produced through focal invasion. How the infection travels in these cases is still somewhat uncertain. Some assume that it passes through canals in the bone, subperiosteal tissue, or lymphatics (Lelongt), or venous, osseous canals and nerves (Polet); or there may be an hæmatogenous extension, directly through the blood (Finnof). At the same time there is evidently a selective action of the bacteria which may show a special affinity for certain portions of the eye.

All this is necessarily of great importance in the treatment of ocular infections, and it devolves upon the general practitioner, as well as on the eye, ear, nose, and throat specialists, to weigh all the above possibilities that are likely to be encountered in arriving at a diagnosis and instituting treatment.—*New York Medical Journal.*

Mouth Washes in Health and Disease

Helen Pixell Goodrich offers a few notes on her observations with relation to the effects of certain antiseptics on pyorrhœa. In every mouth left undisturbed for some hours—as during sleep—a varying amount of white substance accumulates round the teeth. While this fact was no new discovery on the part of the writer, it formed a basis for experimentation.

Digestive Disturbances

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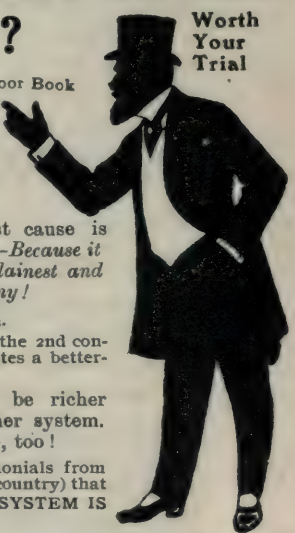

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This white substance when examined microscopically was found to contain salivary corpuscles, epithelial cells, and various organisms, but chiefly the thread-like leptothrix which, if allowed to remain undisturbed, will grow rapidly and calcify to form hard masses of tartar or calculus. The ideal to be aimed at in oral hygiene is the prevention of the growth of leptothrix altogether, there being good reason to believe that it is the cause of pyorrhœa. Approximation to this ideal may be obtained with little trouble. Friction is needed which may be given by the tongue and lips, but a soft brush and a suitable mouth wash should be used very, very often and the brush passed vertically up and down the teeth so that the bristles penetrate between them. A powder or paste is only necessary once a day for polishing the teeth, while the tartar, if formed, should be removed by a dentist. After testing with boric acid, emetine hypochloride, harmine hypochloride, iodine, hypochlorite solution, oxidizing agents, and zinc sulphocarbolate, which is supposed to have a beneficial effect in pyorrhœa when used in 4 per cent. solution, flavine, and other dyes, Goodrich found by experimenting for the effects of these various antiseptics on the bacteria in the mouth, that in health as well as in cases of oral disease, antiseptic mouth washes should be used as often as possible, and that a really satisfactory mouth wash, both cheap and effective, is a saturated aqueous solution of thymol. This antiseptic has a pleasant taste, causing a temporary burning sensation and stimulating a flow of saliva. It is a stronger antiseptic and less irritating than carbolic acid, to which it is closely related. It is not acid and is free from the corrosive action of phenol. One part of thymol dissolves in 1,500 parts of cold water.—*British Medical Journal.*

Syphilis without Chancre in Women

Gaucher states that in most cases of alleged syphilis *d'emblée* the chancre is simply overlooked. Cases, however, do exist in which chancre is absent because the virus is allowed to enter the blood directly. From another viewpoint the chancre is simply an epidermal reaction to the virus so that without epidermis there can be no chancre. In such cases the secondary eruption is the primary manifestation. The author has seen two such cases. In one a surgeon wounded himself deeply with a bistoury while operating on a patient

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with secondary syphilis. No chancre developed in the site of the injury, but in due time a roseola appeared. The other case was an old one in the service of Professor Fournier. An attempt was in progress to treat psoriasis with intramuscular mercurial injections. A patient with syphilis having accidentally received a similar injection, the disease was propagated to a psoriasis patient without any formation of chancre. Two analogous cases occurred in women who presented themselves with syphilitic roseola. Both patients had just been discharged from the surgical service where they had undergone abdominal operations. The disease must have been contracted in the hospital, but no port of entry for the virus could be found and no enlarged lymph node was anywhere in evidence. The author had been treating for secondary syphilis an assistant of the operating surgeon. His mouth was the seat of mucous patches. There could be no doubt that virus had somehow been transferred from this patient to the peritoneal cavity. The second woman, however, had not been in contact with this syphilitic assistant, so that the source of her syphilis could only be conjectural. As long as thirty years ago the author was making the most minute examination of women with "overlooked" chancre. In case after case he failed to find the slightest evidence. There were no traces of chancre, such as is the rule in men; so that it is almost hopeless to find evidence of chancre in women several months after infection. This statement refers, of course, only to the vagina and cervix uteri, for chancre of the vulva and anus is subject to the same laws as chancre in the male. This lesion occurs regularly on cutaneous surfaces and on such mucosæ as are covered with pavement epithelium. There is in this regard no reason why they should not appear anywhere in the vagina or cervix uteri and behave like chancres elsewhere, save that the location is a rare one, like the male urethra. It is, however, very different with the corpus uteri, lined as it is with cylindrical epithelium. Surfaces lined with pavement epithelium do not absorb fluids, while in the other form the reverse is the case. Hence the author believes that the syphilitic virus after copulation readily finds its way into the cavum uteri and passes directly into the blood without epithelial or lymphatic reaction. In some cases an ovum may be infected from the contaminated male principle. This hypothesis will explain the latency so frequently seen in female syphilis, the first outbreak often appearing many years after infection as late tertiary syphilis.—*Journal de Médicine de Paris.—Medical Review.*

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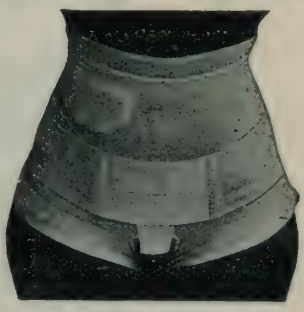

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Miscellaneous

Fees of Physicians and Surgeons

A letter written by the late Sir Lauder Brunton shortly before his death contained the following paragraphs: "The whole question of the remuneration of the medical profession and of its various branches will naturally give rise to much discussion. For example, I have of late years frequently been consulted in regard to abdominal operations. The question, Shall an operation be performed or not? has been left entirely in my hands, and on the correctness of my answer the life of the patient has depended. Yet for my advice I received the fee of three guineas. If an operation was necessary the surgeon received 100 guineas. This enormous disproportion between the value of mere mechanical skill and trained brain work holds in other branches also. These high surgical fees are one of the causes why some kind of co-operative hospital is becoming urgently needed. Before the war began I was working with Lady Henry at the establishment of some kind of insurance for officers' families against sickness or operation. The officer himself was insured, but if one of his family got appendicitis the operation and incidental expenses might run away with the united income of the officer and his wife for a whole year."

Arsenobenzol in Tuberculosis and Syphilis

N. B. Potter (*American Jour. Med. Sciences*, 1916, 152, 823; Dec.) after a review of the literature dealing with the subject, concludes that the prompt employment of arsenobenzol (salvarsan) is indicated in latent, chronic, and moderately active tuberculosis; (*a*) as soon as the nature of an added infection is diagnosed with reasonable probability to be syphilis; (*b*) whenever the history, signs, or symptoms strongly suggest a previous syphilitic infection, particularly if such a patient is not improving on the usually successful hygienic and climatic treatment for tuberculosis; but (*c*) active tuberculosis, acute tuberculosis, and diffuse miliary tuberculosis are usually definite contraindications to the use of this preparation, although in both the first two mentioned groups there will be found many

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syphilitic patients on whom a small dose may well be tried and, unless followed by untoward effects, cautiously repeated in gradually increasing doses. When tuberculosis infects or becomes active in a patient with secondary, tertiary, or even latent syphilis, the careful employment of the drug is also indicated. The more active the tuberculosis, the smaller should be the initial dose; the slower its increase, the less frequent the interval, and the greater care and watchfulness required. Tuberculin-like focal reactions may follow its administration, should be carefully watched for, and if present, the location, intensity and character will frequently guide in the selection of the next appropriate dose or interval.—T. S.—*The Prescriber.*

Magnesium Sulphate in Strychnine Poisoning

Cutler and Alton (*Jour. Experim. Med.*) find that intraspinal injections of magnesium sulphate are of use in controlling the convulsions caused by strychnine, their opinion being based on the results of animal experiments and one human case. They employ one ml. of 25 per cent. solution to each twenty pounds of body weight in adults, and half this dose in young children. If necessary a small amount of ether may also be used. To hasten the excretion of strychnine, 200 to 300 ml. of salt solution should be given intravenously. Should the convulsions return the intraspinal dose may be repeated, always taking the precaution to keep the head elevated. Respiratory failure may be combated by Meltzer's method of intropharyngeal insufflation with calcium chloride injections.—*The Prescriber.*

Prophylaxis of Infection in Wounds

H. Vincent (*Presse médicale*) points out that beneath a simple aseptic dressing applied promptly over a wound, bacteria, ærobic as well as anærobic, often penetrate freely between the time of injury and that of treatment by the ambulance surgeon. The bacteria are given time to infiltrate tissues previously uninjured, and amputation for gas gangrene is at times the result. To obviate this difficulty Vincent recommends that all wounds except penetrating wounds of the chest or abdomen be promptly filled with a disinfecting mixture of one part of calcium hypochlorite with nine parts of boric acid. Owing to the fact that the infection has thus been early checked or slowed down, the

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subsequent surgical treatment is often facilitated and reduced in extent, with less loss of tissue. The measure is especially necessary in times of extensive military engagements, when the wounded are very numerous and cannot be removed to the surgical stations within a reasonable time. Where a long period elapses before treatment, the dry hypochlorite and boric dressing may with advantage be renewed in twelve or twenty-four hours. —*N. Y. Med. Jour.*

Landouzy

By the death of Professor Louis Landouzy, Doyen de la Faculté de Medecine de Paris, French medicine loses one of its brightest ornaments and one of its most attractive personalities. As a clinical teacher he was inspiring. His lectures and clinical demonstrations showed him to be possessed of the real scientific spirit, painstaking in observation and judicial in interpretation. He taught much, but unfortunately wrote little. His gift of speech was remarkable, even for a Frenchman, and seemed to be rendered even more remarkable by the clear bell-like voice to listen to which it was an artistic delight. He was singularly free from the aloofness and hauteur which we are apt in this country to associate with the typical occupant of a professorial chair, and there was never anyone who more disliked priggishness, pettiness or parochialism than he did. His name lives in neurology as the first, with his colleague Déjerine, to describe a particular type of muscular dystrophy.—*Medical Press and Circular.*

Silver Nitrate in Vincent's Angina

Felix Raymond (*Progrés medical*) points out the increase in the number of cases of this condition, owing to the difficulty the soldiers have in carrying out the customary methods of hygienic care of the mouth. He mentions the three methods of treatment in use: methylene blue suggested by Chauffard; salvarsan advocated by Achard; silver nitrate solution practised by himself. Salvarsan gives the best results, but the treatment is lengthy and the drug expensive. The author's technique is to clean the ulceration by mechanical means, and to treat the surface with a swab soaked in two per cent. silver nitrate solution. A gargle of one per cent .cocaine may be used beforehand. There are no complications to fear and no risk of general infection; the

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curetting and the swabbing must be repeated every day for two or three days, and healthy granulations soon make their appearance.—*The Prescriber.*

The Pallid School Girl

In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general breakdown of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anæmic, nervous and more or less devitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto-Mangan (Gude) is just the hæmatinic needed, as it acts promptly to increase the red cells and hæmoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

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Original Communications

THE EVOLUTION OF THE SURGERY OF THE BILIARY SYSTEM*

By W. Wayne Babcock, M.D., F.A.C.S.

Surgeon to the Samaritan, Garretson and American Stomach Hospitals, Philadelphia.

Mr. President, Members of the Ontario Medical Association and may I add Allies in Medicine and Democracy:—I feel it a special privilege to address this association, and I desire, although imperfectly and incompletely, to refer to certain phases relating to biliary surgery.

"When I graduated in medicine," said William Mayo, "all my answers in surgery were wrong and I received one hundred." The examination dealt with gastric ulcer, and I said that women were chiefly affected, whereas, we now know that over sixty per cent. of ulcers occur in men. I said that ulcers of the stomach were usually multiple, we know now that they are almost invariably single. I said that the chief symptom of ulcer was hæmorrhage, we now know that this is an unusual symptom for only one ulcer in five gives it. I said that ulcers were much more frequent in the stomach than in the duodenum, we now know that nearly seventy per cent. of ulcers involve the duodenum rather than the stomach. I said that the ingestion of food produced pain, and we know now that food usually relieves the distress of ulcer so that the patient has 'food ease' and 'hunger pain.'"

A good student of twenty or thirty years ago might likewise have given a very incorrect answer regarding biliary disease and yet have received a perfect mark. He probably would

*Read at meeting of Ontario Medical Association, Toronto, June, 1917.

have said that gall-stones are the chief cause of inflammation of the gall-bladder, we know now that gall-stones are the common sequence of a chronic cholecystitis. He would have said that cholecystitis is a disease of middle or advanced life, we know now that this infection begins in youth or early adult life, and has terminal complications after middle life. He would have said that gall-stones remaining in the gall-bladder rarely produce symptoms, we now know that gall-stones are rarely "silent." He would have given jaundice as the predominant symptom of gall-stones; yet we know now that he who depends upon this symptom will fail to recognize at least nine cases out of ten. He would have described for gall-stone colic, common duct colic, rather than the much more common, antedating, and then undifferentiated, gall-bladder colic. He probably would have written that the chief method of determining the presence of gall-stones is to find them in the stools, yet in barely one per cent. is our diagnosis now made or confirmed by this expedient. But the errors impressed upon us by our teachers still influence many of us and it is of interest, therefore, to study the evolution of biliary surgery, and to attempt to note clearly the traditions and errors of the past, that they may not mislead us now, or hamper our progress in the future.

Biliary surgery is of rather recent origin and many of us can recall the phases through which it has passed. It is hardly fifty years ago that John Stough Bobbs, a Pennsylvania German, then living in Indiana, did the first cholecystostomy, and it was ten years later before J. Marion Sims did the second operation upon the gall-bladder. The operative treatment of biliary disease has come into vogue largely during the last thirty years. Three eras mark the progress of biliary surgery. The first period dealt chiefly with terminal conditions in biliary disease, the second with the stage of marked intermediary symptoms, the third, the present tendency to refine the operative technique and to emphasize the earlier stages of biliary disease. Twenty-five years ago gall-bladder disease was rarely recognized except in its very advanced and complicated forms. Stones were diagnosticated when they had left the gall-bladder and passed into the common duct, or had ulcerated into the intestine. Gall-bladder inflammation was sometimes thought of when empyema, gangrene or perforation of the gall-bladder had occurred, but often the patient died before a correct diagnosis was made. Gall-stones within the gall-bladder were

usually considered to be symptomless, and the early manifestations of the disease were hidden under such symptomatic and misleading terms as gastritis, dypepsia and gastric catarrh; while acute cholecystitis was diagnosticated as acute gastritis, gastralgia, acute indigestion, acute intestinal colic or gastric fever. Even the passage of stones into the common duct, the production of local peritonitis, of pancreatitis, and of other complications was rarely recognized, but received such symptomatic terms as catarrhal jaundice, Charcot's fever, idiopathic peritonitis, nervous dyspepsia and rheumatism of the stomach or abdominal wall. With the advent of the Ewald test meal we were pleased to make such descriptive diagnoses as acid gastric catarrh, hyperchlorhydria, gastrosuccorrhœa, or other terms based upon the gastric findings. As exact diagnoses were made chiefly upon the post-mortem table, these terms sufficed.

It is interesting to turn to the text-books of this period, as for example, the early editions of Osler's Practice, and to visualize from their descriptions of cases of gastralgia, gastric neurosis or hyperchlorhydria, the clear evidence of a cholecystitis or a gastric ulcer. During this period, operations upon the gall-bladder were rarely undertaken except for stones. The operations were not very common, and one of the early papers of the Mayos reporting over fifty operations upon the gall-bladder was rejected by a noted eastern clinician and editor, with appropriate remarks for such presumption on his credulity. Even at the Johns Hopkins Hospital, hardly forty operations on the gall-bladder had then been performed.

Incisions into the duct were feared, and attempts were often made to crush or dislodge the stones by needling or by pressure with the fingers or forceps. With the introduction of the Murphy button in 1892, cholecystoenterostomy, which had previously first been performed by Winiwarter as a two-stage suture operation, and cholecystoduodenostomy which had first been successfully performed by Terrier, obtained a transient popularity. Although strongly advocated, this valuable procedure was indiscriminately used, and until recently, was largely abandoned and almost forgotten.

In the second epoch of biliary surgery, thanks to the work of Kehr, Mayo Robson, Moynihan, the Mayos and many others, the type of biliary colic produced by stones in the gall-bladder became more clearly recognized, and was differentiated from the colic due to obstruction of the biliary ducts. Jaundice was

no longer considered necessary in making a diagnosis. Obstruction in the lower part of the cystic duct from cancer was differentiated from that due to stones, and the valuable law of Courvoisier was formulated. This emphasized the fact found in about eighty per cent. of the cases that an enlarged and palpable gall-bladder associated with progressively deepening jaundice, continuous clay-colored stools and bile stained urine indicated duct obstruction from cancer or more rarely a stone impacted in the ampulla of Vater, while a contracted, impalpable gall-bladder associated with intermittent colic, intermittent jaundice, chills, fever and sweat, and intermittent biliary and clay-colored stools was evidence of gall-stones in the communis. Maurice Richardson, of Boston, wrote in 1904, that the one thing established in biliary surgery, was the necessity for external drainage of bile—a teaching that has cost the lives of many patients. Biliary drainage, therefore, was considered the *sine qua non* of biliary surgery. Operations upon the duct during this period were developed and improved.

Under the advocacy of Kehr, cholecystectomy was more frequently practised, it was performed, however, in cases of advanced disease, and the mortality was almost prohibitive, for deaths after operation upon the biliary system depend more upon *when* you operate than *how* you operate, and at present our cases should be so selected, and our technique so good, that cholecystectomy gives, if anything, a lower mortality than cholecystostomy.

The present period of biliary surgery began about five or seven years ago, and was marked by the tendency to operate earlier in the course of the disease, so that whereas, in the first epoch, operations were performed for complications thirty to forty years after the beginning of the cholecystitis, and in the second period for gall-stones, on an average of twenty or twenty-five years after the beginning of the cholecystitis, operations for biliary disease are now often performed only ten or fifteen years after the inception of the infection. Of course, in many diseases we would be considered lax if we waited on an average of ten years before making a diagnosis, but here we are complacent and we resent being stampeded to any undue haste. We are, therefore, very slowly, but progressively catching up with the pathology of the disease of the biliary tract. The operations are now more radical and performed earlier in life upon patients in better physical condition, and the mor-

tality has been greatly reduced. Thus it has been found that an early cholecystectomy gives a mortality less than that of a late cholecystostomy. Our present experience, although not remarkable or unusual, may seem to illustrate this. Of three hundred and sixty-seven operations upon the biliary system, fifty-seven cholecystectomies were done before 1912, with ten deaths, or a mortality of over seventeen per cent. In thirty-eight cholecystostomies performed before 1912, there were three deaths, or a mortality of seven and eight-tenths per cent.; of three anastomotic operations between the biliary system and the duodenum, there were two deaths, or a mortality of over sixty per cent. In 1912, we revised our methods of operating in biliary disease; operating much more frequently for gall-bladder inflammation before the appearance of stones, and instead of draining gall-bladders that were in good or fair condition, and removing those that were very diseased or associated with a purulent or gangrenous cholecystitis, we removed the gall-bladders that were slightly or moderately diseased, and, unless the patients were young or in very good physical condition, left in the gall-bladders that showed advanced or very destructive lesions. At first, we simply drained the badly damaged gall-bladders in persons debilitated by age, or prolonged infection, but later we began to substitute in selected cases, especially in those patients who had complicating duct obstruction, anastomotic operations between the biliary system and the duodenum or stomach. Aided by transverse incisions and their modifications, the substitution of Narco-local anæsthesia for spinal analgesia or ether, in patients who were bad risks, these changes revolutionized our results in biliary surgery. Thus, since 1912, in two hundred and one cholecystectomies, there was a mortality of three and one-half per cent., although many of the operations were complicated by other procedures upon the stomach, bile ducts, or other intra-abdominal organs. In forty-eight cholecystostomies, however, since 1912, there were five deaths, a mortality of 10 4-10 per cent., or about a two per cent. increase in the mortality for cholecystostomies. The general mortality for operations upon the biliary system has greatly decreased; being over ten per cent. previous to 1912, and about five per cent. since 1912. Even more striking were the results obtained after anastomotic operations; thus, of twelve recent operations in which an anastomosis was made between the gall-bladder or the common bile duct and the

duodenum or stomach, chiefly in elderly patients and in poor operative risks, there was no mortality.

While we can thus markedly reduce the mortality by using judgment in the selection of the operative procedure for the particular case, of even greater importance is the stage at which intervention is practised. We have found it convenient to divide biliary disease into three stages—first, a stage marked by more or less remote reflex and toxic symptoms and by the absence of local signs, a stage characterized by a chronic biliary catarrh previous to the formation of stones. In this stage we base our operative diagnosis upon (*a*) changes in the gall-bladder wall or its lining mucosa; (*b*) upon changes in the bile which is often thick, turbid, tarry, or otherwise altered; (*c*) upon enlargements of the periportal lymph nodes, or (*d*) upon peritoneal adhesions, or alterations in the liver structure contiguous to the gall-bladder, showing previous inflammatory change. With these evidences of chronic cholecystitis a cholecystectomy is performed, and in about one hundred and fifty cases the mortality has been under one per cent.

The second stage of cholecystitis is characterized by the presence of calculi and the symptoms resulting from their movements, or cholecystic colic. These attacks are violent, often follow indiscretion in diet, usually require an opiate, frequently occur at night, and last but a few hours. In this second stage of cholecystitis, cholecystectomy is usually the preferred operation, and the mortality is from three and one-half to five per cent. The increased mortality is due largely to complications and the greater age and lessened resistance of the patient.

The third stage of cholecystitis is often a final or terminal stage characterized by such acute and dangerous complications as empyema or gangrene of the gall-bladder, obstruction of the common bile duct, acute pancreatitis, rupture or perforation of the gall-bladder, malignant disease, acute peritonitis, or intestinal obstruction from stones. These patients, for the most part, are between the ages of forty-five and eighty, and they are a reproach to our art, for they show an average procrastination in the effective treatment of cholecystitis of at least twenty years. Until recently these patients gave us a high mortality.

Gradually we have reduced the use of external drainage of bile. Formerly over ninety per cent. of the patients were drained; while during the past year hardly ten per cent. have

had the bile drained through the incision. In the earlier stages bile drainage is obviated, by doing a cholecystectomy. In the long standing cases, those of the third stage of biliary disease, we are obviating the necessity for drainage more and more by anastomosing the gall-bladder with the duodenum. By using a transverse incision or one of its modifications, it is not difficult to do a cholecystoduodenostomy under local anæsthesia with novocaine, if two or three rows of sutures after the plan of the modern gastroenterostomy are applied with a good technique, and if there is somewhat thickened gall-bladder, there should be no secondary leakage of bile. Care must be used in selecting patients for this operation, or a secondary cholecystectomy may be necessary from a secondary infection of the gall-bladder. We have had one case in which such a secondary cholecystectomy was necessary; in this case we found a fairly large stoma and a mixed coccal and bacillary infection apparently of intestinal origin. To obviate the escape of the intestinal contents into the gall-bladder after these anastomotic operations we have recently tried to produce anastomosis with the formation of a valve, the fundus of the bladder being invaginated through a transverse slit in the duodenum, and the union being partially enfolded in the duodenal wall, somewhat after the plan of a Senn or Kader gastrostomy.

We would limit cholecystoduodenostomy chiefly to very elderly patients in whom a secondary obstruction of the ducts was feared, or, in certain cases of mucocele or empyema of the gall-bladder where the patient is not in condition to stand a cholecystectomy. One has but to observe the after course of these feeble patients as contrasted with those treated by cholecystostomy or choledochostomy to be impressed by the advantage of the internal drainage of bile.

In the evolution of gall-bladder surgery, better exposure and a greater facility in operating have been secured by substituting for the simple transrectus incision, those complicated by the division of the rectus, such as the simple transverse incision, the Bevan incision, or the right-angled incisions of Don or Perthes. As to peritoneal drainage, improvements in technique and the increasing tendency to operate earlier in biliary disease, have gradually reduced its necessity. In a large percentage of the cases of cholecystectomy we doubly tie the stump, and if satisfied, after a careful review of the field, close the wound without peritoneal drainage. In anastomotic operations we

usually put in a small tube or cigarette for fear of possible leakage. It is evident, however, that in many cases, this is superfluous.

It is interesting to note in biliary surgery, as in many other matters, that our evolution has occurred in the form of a circle. After studies far afield in the laboratory, we have returned to the anamnesis as giving the best diagnostic evidence of gall-stones, of cholecystitis and of common duct obstruction. Again we have returned to ectomy early advocated by Kehr and then abandoned; and we are apparently returning, although in a modified way, to the anastomotic operations which were in vogue over twenty years ago. It is evident, however, that there is yet much to be done for the perfection of this phase of abdominal surgery. Accepting the dictum that a gall-bladder once infected is always infected, and the evidence that serious physiologic change does not follow its removal, the gall-bladder should be removed at the incipiency of the disease, that is between the ages of fifteen and thirty, and not between the ages of forty-five and eighty.

(1) As a corollary, cholecystectomy should be the predominant operative procedure in biliary surgery.

(2) With the destruction of the lining mucosa of the gall-bladder by violent disease, the necessity for cholecystectomy is less evident while the mortality of the operation for violent infection in the debilitated is such that a safer operation should be substituted; *therefore, drain for gangrene, extirpate for catarrh.*

(3) Choledocho-duodenostomy is indicated in elderly debilitated patients who have or have had jaundice, or the evidence of common duct obstruction, who will not well bear a dochotomy who may have overlooked or residual stones, or who have duct obstruction as in inoperable carcinoma, or certain cases of mucocele, not to be treated by ectomy. It is also to be considered in the treatment of Hanot's cirrhosis of the liver.

(4) The patients least able to withstand the shock of operation are those who have had prolonged external drainage of bile, jaundice or acute septic choledochitis. The operative treatment should, if possible, antedate and prevent these complications. Excluding technical operative errors the mortality of biliary surgery comes largely from delayed and secondary operations.

Is a patient ever better off for the external drainage of bile or worse for the internal drainage into the bowel? *Per se* the external drainage of bile does not benefit the patient more than the drainage of bile into the bowel. Contrasting the result of the internal drainage of purulent and necrotic forms of cholecystitis with those treated by 'ostomy—in our small series there has been a much smoother and easier convalescence in the former. Harm comes, however, when internal drainage leads to an ascending infection of the biliary system, so that attempts should be made, if possible, to develop efficient types of valvular anastomosis. In the evolution of gall-bladder surgery cholecystostomy should progressively have a more and more restricted use. We now employ it in hardly ten per cent. of the cases. It should be considered a makeshift operation only to be used when more effective operations are inexpedient on account of technical difficulties or a greater mortality.

Infection products in biliary disease are much less dangerous to the peritoneum or tissues of the abdominal wall than the products of the inflamed appendix; therefore drainage is not required to the same degree.

Perhaps some of these statements are heretical, perhaps time and the evolution of the subject may show their fallacy; if so, may I ask you to pardon the enthusiasm in error that comes with a too limited experience.

2033 Walnut Street.

SAFEGUARDING THE HEALTH OF CHILDREN*

By C. E. A. Winslow.
Professor of Public Health, Yale School of Medicine, New Haven, Conn.

When Dr. McCullough, last winter, invited me to address this conference I hesitated a little to accept the honor. I knew that I could count on your courtesy and consideration but from my own standpoint I felt I should be somewhat uncomfortable in speaking to a group of men who were engaged in a gigantic struggle for civilization in which my own nation bore no part. To-day, however, the cause for my hesitation exists no longer. We stand in intent and purpose side by side. The flag of the United States already floats beside yours in the North Sea, and will soon take its place in the trenches of Flanders. The United States is preparing with earnestness and enthusiasm to take its part in the supreme conflict.

The subjects you are met together to consider form an integral part of this conflict. Wars to-day are fought by nations, not merely by armies. Behind the battalions in the field are other battalions in the munition factories and on the farms whose devotion is equally essential to success. Man power in one form or another will determine whether the conception of human society which you and I represent or that which derives its inspiration from Potsdam shall ultimately triumph. Every life saved from preventable disease will count in the war or in the struggle between national ideas and national aspirations which will come after.

Among the many fields of public health of the present day there is none which is so important, none which is fraught with such beneficent possibilities of practical life-saving as that which deals with the prevention of infant mortality. The campaign carried on in New York City has reduced the infant mortality rate from 154 in 1906 to 93 in 1916, a reduction which amounts to a saving in that city of over 8,000 lives a year. Recent attempts by Chapin and by Schneider to estimate the relative value of various lines of public health endeavor

* Read at the Annual Meeting of the Ontario Health Officers' Association, Toronto, May, 1917.

have led both authorities to estimate that infant welfare work offers one-fifth of the total possibilities of life-saving which are open to the health department; and I believe they are undoubtedly correct in their conclusion.

The central feature of this campaign is, of course, the Infant Welfare station—not a "milk station" merely, but a baby's clinic and dispensary where the children can be brought for weekly examination and from which public health nurses may go out to carry instruction into the home of the individual mother. Every community of 10,000 inhabitants should have such a station and in larger cities one station to every 20,000 of the population will be found a reasonable allowance. It is important that so far as possible the work of the station be extended so as to include pre-natal care. Experience in Boston has shown that such care may result in cutting the infant mortality to one-half the figure prevailing among families not receiving pre-natal advice.

The application of the educational influence of the infant welfare station to the problem of the rural districts offers considerable difficulties, which, I presume, may confront many of the health officers of this province. I think that for this task we must look chiefly to the public health nurse, who should be provided in every rural community as a first essential of public health protection; but somewhere behind her there must be available competent pædiatric knowledge which can, perhaps, be secured by co-operation with the infant welfare organization of the nearest city. In any case, you cannot rest satisfied with your health protective machinery until every babe borne in the Province of Ontario is assured through public or private means of the advice of an infant welfare nurse and of the prompt aid of a pædiatrist, when needed.

The deaths of infants are due principally to three great groups of causes, prematurity, congenital debility and other causes operating at the time of birth, gastro-intestinal infections and pneumonia and other respiratory diseases. The machinery of the infant welfare station helps us to deal with all of them, and in particular with the second and most considerable group that of the summer diarrhœas and other digestive disorders. These diseases are due to a combination of two factors, dirty or stale cow's milk and high atmospheric temperature. The normal infant can usually manage to get along even with poor milk in winter; it can endure a high summer temperature if

fed at the breast. It is the combination of putrefactive bacteria and heat which undermines its vitality and leads to serious and so often fatal results. The remedy for this condition is, of course, breast feeding. The success of an infant welfare station as has often been said is to be measured not by the quarts of milk distributed, but by the number of mothers trained to nurse their own children. Yet, for some infants, artificial feeding will always be a necessity; the provision of a safe artificial milk supply is, therefore, a necessary part of a general programme of child saving.

We can go far toward securing clean milk by an adequate system of farm and store inspection, coupled with bacteriological and chemical examinations of the product. The milk supply should be graded on the basis of scores and bacteriological counts, into three grades, now generally recognized as suitable for the use of infants and of adults, and for cooking respectively. Even after all this is done I am strongly of the opinion that a further step still should be taken in the pasteurization of all milk supplies, and particularly of those designed for infant use. Clean milk and safe milk are not synonymous terms. Bitter experience has taught us that no possible system of safeguards can prevent occasional exposure of milk to an unsuspected incipient case or carrier of the germs of typhoid fever, septic sore throat or scarlet fever. When this happens, one touch of a finger, one cough over the pail will do the business. Again and again this has happened in elaborately constructed and conscientiously operated dairies. Even the exclusion of tuberculous cattle, theoretically a simple matter aside from the question of cost, has failed in some of the most famous certified milk barns in the United States. I am strongly of the opinion that there is no such thing as a really safe milk supply. As in the case of water supplies, we try to secure as high in initial purity as possible, and then filter or disinfect to secure absolute safety, so here we should keep the milk supply as clean as economic conditions will allow and then make assurance doubly sure by pasteurization.

It is, perhaps, unnecessary for me to emphasize before this audience that by pasteurization, I mean heating to 140° to 145° at least 20 to 30 minutes. Flash pasteurization at high temperature for short periods is altogether unreliable. Pasteurization by the holding system, on the other hand is efficient and reliable, and when properly applied produces no change

in the flavor or digestibility of the milk. It apparently does destroy certain vitamins present, however, and orange juice or some other source of vitamins should be provided for infants fed only on the pasteurized product.

The protection of infants from the acute communicable diseases is another phase of health prevention which requires at least a brief consideration. In the home of Dr. Hibbert Hill, it would be presumptuous to dwell in detail upon this branch of public health science which he has illuminated by his brilliant researches. The principles of concurrent epidemiology which he has laid down offer us our surest guide in dealing with the whole group of contact-borne diseases. There are one or two point, however, in connection with the problem which I should like to emphasize.

First of all, it is important to remember how serious in the aggregate are the so-called children's diseases with which familiarity has bred a somewhat dangerous contempt in the popular mind. With the advances which have been made in dealing with typhoid and scarlet fevers, measles and whooping cough are becoming year by year of greater relative importance. In New Haven, the average death rate for the past five years has been 15.6 per 100,000 for typhoid fever; 10.8 for measles; 8.6 for whooping cough, and 5.2 for scarlet fever, and the typhoid rate is, of course, decreasing year by year much more rapidly than either of the others. Measles and whooping cough are, therefore, public health problems of considerable importance.

The second point to be emphasized is the particular danger from these maladies in the earlier years of life. The fatality of whooping cough is five times as great under one year of age as over five; the fatality of scarlet fever ten times as great; the fatality of measles twenty times as great. Special efforts should, therefore, be made to protect young children from infection, and this is one reason why schools should never be closed during epidemics, if the services of a public health nurse are available. The most effective thing that can be done under such conditions is to make a careful examination of all school children every morning for the detection of the disease in its early stages, and to secure by home instruction the greatest possible precautions against exposure of infants to infection.

The third point which must be borne in mind is the fact that it is precisely in these very early stages that the infective

agent is most virulent and most abundant in the discharges. The classic isolation periods may be materially shortened in view of recent advances in bacteriology—in measles, to five days after the onset, and in whooping cough to two weeks after the first characteristic cough—and every effort devoted to securing prompt isolation of new crops of cases as they arise. Bacteriological methods for the diagnosis of whooping cough will prove of material value in the early recognition of this disease.

In spite of all that public health authorities can do, exposure to missed cases will frequently occur, and we must rely in large measure on the education of the public in the principles of disease transmission and on the cultivation of a sanitary conscience which will impel those who are "coming down" with any sort of communicable disease, even if it appears to be the mildest cough or cold in the head, to remember that the disease germs they are distributing may produce a fatal illness in the next victim, particularly if that victim happens to be a young child.

Recent investigations at the Rockefeller Institute and elsewhere have made it clear that pneumonia, one of the greatest single factors in the infant death rate, must be treated as a definitely communicable disease and guarded against by similar precautions to those which have just been discussed. We now know that the particular types of pneumococci which cause most fatal pneumonias, belong to definite and recognizable types not ordinarily found in normal human throats and the protection of infants from contact with persons suffering from respiratory affection becomes doubly important. This fact, and the success which has followed the serum treatment of pneumonia, caused by at least one of these types, makes it important that pneumonia should be made a notifiable disease and that laboratory facilities should be furnished for the determination of the particular type of organism at work in any given case.

Vital resistance is, of course, a very important factor in determining the outcome of an attack of this disease. The educational work of the infant welfare station and the visiting nurse helps, therefore, to combat it, through every step taken to improve the technique of infant care. The social and economic condition of the family, here, as in the whole field of infant health, exerts a far reaching influence. The pneumonia death rate among children under five years of age for the period

1908-1912, was 371 for Providence, R.I.; 377 for New Haven, Conn.; 405 for Boston, Mass., and 706 for Fall River, Mass., and the enormous excess at Fall River is primarily due to the trying conditions which result from the employment of a large proportion of women in its textile mills.

Poverty and ignorance as Dr. Emmett Holt has said, are the twin causes of infant mortality. The stress of the great war in which the world is engaged is bound to accentuate the severity of the economic struggle. It is for us to develop our preventive and educational machinery to cope with the situation.

Every American has thrilled with pride at the stories of Canadian heroism at Vimy Ridge and at many another point where the conflict has raged hottest. We in the United States ask for nothing more than that our troops, when their turn comes, may prove themselves worthy to stand besides yours. We believe, however, that your fight and ours is not to be won alone in the fields of Flanders. Ambassador Gerard tells us that there are between seven and eight thousand social workers doing infant welfare work and other forms of public health work in Berlin. We cannot be less vigilant than the enemy in protecting the reservoirs of national vitality. All our reserve power may yet be needed for the winning of the war and for the rehabilitation of Belgium, of France, of Serbia, of Poland. The great democracies of the western world will not be doing their part unless they meet the military needs of the next three years or the next five years, and at the same time mobilize their forces as they have never been mobilized before for the defence of the civil population against preventable disease.

Reports of Societies

ONTARIO HEALTH OFFICERS' ASSOCIATION

The Ontario Health Officers' Association held its sixth annual meeting in the Medical Building of the University of Toronto, on Tuesday and Wednesday, the 29th and 30th of May. The attendance was upwards of 300.

The meeting was held as a general session during the first day, and upon the second day was divided into a general session and one upon public health administration.

Dr. A. J. Macaulay, M.O.H. of Brockville, made an ideal presiding officer.

Suitable reference was made to the death of the late Vice-President, Dr. Vardon, of Galt.

The first session included a discussion on venereal diseases; the paper, with slides, being given by Dr. Gordon Bates, of Toronto. The discussion was carried on by Drs. C. H. Hair, C. E. Trow and others.

The subject of infantile paralysis was presented by Dr. H. W. Hill, M.O.H. of London, who gave a most instructive paper upon this subject. Papers upon the same subject were given by Drs. Durocher and Cruickshank, of Windsor, and by Dr. Green, of Stoney Creek. There was a free discussion, led by Dr. Amys, M.O.H. of Peterborough.

In the afternoon session, after a short address by the President, Dr. C. J. Hastings gave, on behalf of the Mayor, an address of welcome. This was succeeded by the address of the day, given by C. E. A. Winslow, Professor of Public Health, Yale School of Medicine, New Haven, Conn., upon the subject of "Safeguarding the Health of Young Children." Professor Winslow's address gave a description of some practical methods of life-saving. He pointed out that the campaign carried out in New York has reduced the infant mortality rate in that city from 154 in 1900 to 93 in 1916, which means a saving for that city of over 8,000 lives a year. Recent estimates of the comparative value of various lines of public health endeavor show that infant welfare work offers one-fifth of the total possibilities of life-saving which are open to the health department.

Professor Winslow pointed out that every community of 10,000 inhabitants should have not a "milk station" merely,

but a baby's clinic and dispensary where children may be brought for weekly examination, and from which public health nurses may go out to carry instruction to the home of the individual mother. In larger cities there should be such a station for every 20,000 of the population. The nurses should also undertake the prenatal care of mothers. The experience of Boston has shown that such care may result in cutting the infant mortality to one-half the figure prevailing among families not receiving prenatal advice. For the rural communities, there should be public health nurses backed by available competent pædiatric knowledge which might be secured by co-operation with the infant welfare organization of the nearest city (*or with that of the Provincial Board of Health.*)

The essayist said that the deaths of infants are due principally to three great groups of causes: (1) Prematurity or congenital debility and other causes operating at the time of birth. (2) Gastro-intestinal infections. (3) Pneumonia and other respiratory diseases. The machinery of the infant welfare station helps in dealing with all of these groups, the more especially with the second, namely, summer diarrhœas and other digestive disorders. Means of procuring adequate and safe milk supplies are indicated in the paper, and the value of inspection and pasteurization pointed out. The importance of measles and whooping-cough as public health problems were discussed, especially in the very earliest years. The fatality of whooping-cough is five times as great under one year as over five years, of scarlet fever ten times as great and of measles twenty times as great. These facts indicate the great necessity for the protection of young children against infection. Schools should *never* be closed during epidemics. The services of the public health nurse should be secured and an examination of school-children made every morning for the detection of the disease in its earliest stages.

The whole paper is of the greatest value and should be read by every health officer. (See page 316).

The Hon. W. D. McPherson, Provincial Secretary, made a short address of welcome to the members of the Association, in which he showed evidence of intense interest in public health matters. His address was received with great enthusiasm.

Dr. Chas. J. Hastings and Dr. J. F. Hanly each gave comprehensive addresses upon public health nursing.

Dr. F. D. Canfield read a paper on "The Adrenals," and the veteran chairman of the Provincial Board, Dr. Adam

Wright, spoke upon "Rest and Sleep as Factors in Disease Prevention."

On the second day the morning session of the Association was carried on in two sections. The general session included papers upon "Sex Hygiene," by Dr. N. W. Woods, and "Mendelism," by Dr. Jas. Roberts. There were two splendid papers on the subject of Tuberculosis, the one by Dr. D. R. Craig and the other by Dr. A. R. Hanks. Dr. Jenner discussed "The Public School as a Place of Instruction in Practical Sanitation."

In the section on Public Health Administration, there were papers upon the difficulties of medical officers by Drs. Macdonald, D. A. Kidd and F. H. Mitchell, on the Education of the Public by Dr. H. Logan, upon the Public Health Act by Dr. A. Nichol, and upon the Relationship of the District Officer to the M.O.H. of the Municipality, by Dr. G. F. Richardson.

Most excellent papers upon "Ways and Means of Conducting Public Health in the Average Town" were given by Dr. C. A. Patterson, and upon some practical points in Enforcement of the Regulations, by Dr. H. Ross.

Dr. W. Doan, of Harrietsville, and Dr. F. King, of St. Catharines, gave interesting papers upon their experiences as Medical Officers of Health.

On the afternoon of this day the session was entirely taken up by papers on the subject of Epidemiology. Measles, Scarlet Fever and Diphtheria were discussed by Drs. A. A. Metcalfe, J. C. Hutchinson and A. H. Speers. Variola was the subject of a paper by Dr. J. P. Boyle, while Disinfection was discussed by Drs. R. K. Anderson and James Campbell.

The matter of Communicable Diseases was the subject of papers by Drs. J. H. Howell, W. R. Mason, and Jas. Mc. Potts, while Dr. S. F. Millen ably handled the question of Typhoid Fever in Rural Communities. All these matters were the subject of general and wide discussion.

Drs. Fitzgerald and McCullough answered the questions submitted in the "Question Drawer."

The officers and committees elected were as follows:—

President, Dr. H. W. Hill, M.O.H., London; 1st Vice-President, Dr. G. F. Cruickshank, M.O.H., Windsor; 2nd Vice-President, Dr. E. A. Williamson, M.O.H. Kingston; Secretary, Dr. J. W. S. McCullough, Toronto.

The Committee on Papers and Arrangements comprises Drs. G. A. Dickinson, J. J. Harper and J. W. S. McCullough.

Editorials

THE RETURNED SOLDIER PROBLEM

Of course, everyone is interested in the welfare of the returned soldier, and especially the disabled soldier. Early in the war it was recognized that numerous hospitals and homes would be required for the invalids. Their re-education was also considered a very important matter.

To meet the requirements of the emergency a Military Hospitals Commission was formed, composed of civilians and laymen, with one from the Medical Service. Sir James Lougheed, who had for some time taken great interest in the subject, was made Chairman. This Commission came into existence June 30th, 1915. By a new enactment, October 12th, 1915, the Commission was empowered to select medical and nursing staffs. It was considered at this time that a central clearing hospital should be established, and the old Bishop Strachan School, College Street, Toronto, was secured for the purpose, and opened November 21st, 1915.

Shortly after this the Hospital Commission became a Unit for Home Service, and organized its own medical staff with Dr. Thompson, M.P., of Yukon, Medical Superintendent, with the rank of Lieut.-Colonel. This unit was organized in rather a hurried way, in December, 1916. Friction very soon arose between the Commission and the Canadian Army Medical Corps. A short time after this the Government acting, as was supposed, on the advice of Colonel Marlow, in his general report,

decided to appoint a Surgeon-General of the Medical Service, Invalids. Dr. John Taylor Fotheringham was appointed Surgeon-General of Invalids.

Before General Fotheringham reported for duty, May 1st, much confusion existed. A special committee was appointed by Parliament to consider and report on the reception, care and re-education of the wounded and disabled returned soldiers, composed of Sir Herbert Ames (Chairman), Hon. C. Marcil, Hon. G. Murphy, Messrs. R. B. Bennett, F. McCurdy, W. Middlebro, Duncan Ross, Donald Sutherland, and F. Pardee.

This committee held various meetings, especially in Ottawa, Montreal and Toronto, and examined many witnesses. General Fotheringham gave evidence May 3rd. The chairman stated, "This Committee have found a situation of divided authority, and have been taking evidence, much of which is more or less conflicting." General Fotheringham said in part, "The civilian organization founded as the Military Hospitals Commission, although at the time necessary, and in my judgment still necessary, has reached a point at which a redefinition of its functions by the Government is necessary. From the point of view of the medical attendants serious confusion exists. Q.—Serious what? A.—Confusion in authority with resulting confusion everywhere."

Without considering the various phases of General Fotheringham's evidence, we may state, that he fully approves of the major part of the work which has been done, and is now being done by the Commission, particularly as to procuring hospitals, taking care of them, and re-educating the disabled. He thinks, however, that the A.M.C. should look after

the medical care, while the Commission superintends vocational training and kindred subjects. Q.—"A mixed service?" A.—I would rather say "a combined service." That is to say the latter should deal with what may be called the civilian side of the case. In speaking thus, we think General Fotheringham represents the views of the great mass of the profession in the Dominion, and also the opinions of the members of the C.A.M.C.

At the meeting of the Academy of Medicine, Toronto, held July 10th, a resolution was unanimously passed. We give the more important portion of the resolution as follows: Be it resolved that it is the opinion of the Academy of Medicine that the medical and surgical treatment of soldiers wounded and ill should be placed under the care of duly appointed members of the C.A.M.C., who shall be responsible only to the Military Department, and that all hospitals for the reception and care of such soldiers shall be placed directly under the Military Department through the C.A.M.C. The Academy believed further that a Surgeon-General directly responsible to the Minister of Militia, and with a seat on the Military Council, should be appointed forthwith. The concluding paragraph stated that the Academy generally endorsed the views of General Fotheringham as given in his evidence before the Parliamentary committee.

The Committee's Report.

We extract as follows from the report of the Parliamentary Committee on the Care of Returned Soldiers, presented July 18th:

The majority of the committee, Sir Herbert Ames, and Messrs. Pardee, Bennett, Murphy, Marcil and Ross, recommend the creating of a new governmental department or sub-depart-

ment, under a Minister of the Crown, directly charged with the oversight of all measures dealing with the returned soldiers problem. The three other members, Messrs. McCurdy, Middlebro and Sutherland, take the view that the militia authorities should be vested with control of the returned men until the time of their actual discharge from the service, and that, following the example of the French Government, a National Bureau for the discharged soldiers should be created by the government.

If neither of these alternatives is acceptable to parliament, the committee concurs in the recommendation of the military authorities that the medical treatment of returned men until discharged should remain entirely under the control of the Army Medical Corps.

The committee agrees on the following recommendations:

That both Federal anl Provincial authorities take up effective measures to prevent the spread of tuberculosis.

That those soldiers who are hopelessly insane should be cared for at the expense of the Federal Government in Provincial Institutions.

That returned soldiers who are suffering from venereal diseases should be quarantined at the port of arrival in Canada until cured.

That orthopædic institutions be provided at centres throughout Canada in addition to the one located in Toronto.

That a sufficient number of returned men be induced to learn and follow the occupation of manufacturers of artificial limbs, and that their services be utilized to supply limbs to soldiers free of cost, and renewals and repairs at the cost of the State during the lifetime of the soldiers.

That returned men who have been undergoing convalescent treatment and have partially completed courses of vocational training be allowed to continue such courses for a period of two months after their discharge as medically fit if, in the opinion of the vocational training officer of the district, it is in the interest of the State and of themselves that they should do so.

THE AMERICAN COLLEGE OF SURGEONS

It was announced last year that the Fellows of the American College of Surgeons were endeavoring through their own subscriptions to raise an Endow-

ment Fund of $500,000, to be held in perpetuity, the income alone to be used to advance the purposes of the college. We have recently been told that this amount has been secured, solely, however, from its own Fellows. Quite a large proportion of the Fellows, we understand, subscribed $500 each. This college has now enrolled about 3,400 Fellows in the United States and Canada.

We are glad to be able to say that the organizers of this great body of surgeons are more than pleased and satisfied with the work which has already been accomplished.

FOOD SUPPLY

The Food Controllers have been appointed recently, Rhondda for Britain, Hoover for the United States, and Hanna for Canada. The task assigned to these men is to keep the people of Great Britain, the United States and Canada regularly supplied with food, and to distribute the surplus—if such there be—among the allies. It is not expected that they will look after the production of food, but rather to take charge of what is produced, and to see that it is fairly divided and that none is wasted.

Who is Mr. Hanna? Mr. W. A. Craick, has told us that he is a man who became a member of the cabinet three years after he entered the Ontario Legislature, overhauled the provincial secretary's department, created the industrial farm, and did a tremendous amount of good work in connection with public health matters, and the care of large insti-

tutions. He called him the champion position refuser of Canada. He refused the chairmanship of the Dominion Railway Board "just as unconcernedly as he had declined other tempting offers." "He has declined more offices than a dozen men might fill; he might have been chief counsel for the Grand Trunk; he might have taken high local office on the New York Central; he might have been city counsel for Toronto; he might have held office in the Borden Cabinet. But he would have none of them." Mr. Walter Willison, son of Sir John Willison, will be associated with him in his work.

CHILD WELFARE

At the recent meeting of the Ontario Health Officers' Association, Professor Winslow, of the Yale Medical School spoke about the safeguarding of the health of children. He considered that among the many fields of public health at the present day there is none so important as that which deals with the prevention of infant mortality.

Dr. J. W. S. McCullough told us that he has estimated that infant welfare work offers one-tenth of the total possibilities of life saving which are open to the Health Department. A campaign carried on with this object in New York City reduced the mortality rate from 154 to 93 per thousand within a period of ten years.

The National Council for Women takes great interest in matters pertaining to child welfare, which its members think should be placed under the

control of a Conservation Committee until a Federal Bureau of Health is established. They think the children are the greatest of all national assets.

BABY WELFARE ASSOCIATION OF HAMILTON

A number of years ago several far-sighted people, including some ladies, doctors, and a few laymen, formed an organization, having in view the welfare of children and especially infants. One of the first efforts of this body was to improve the quality of milk. They also gave systematic instruction to mothers regarding the care of infants. They carefully looked after the little ones when they became ill, and together they accomplished a vast amount of good. So far as we know, Hamilton was the first city in Canada to organize thoroughly in this direction.

In recent years they have had what they call a welfare week, which now has become an annual affair. This year, the welfare week commenced June 23rd, and was very successful in all respects. The working committees and others interested inspected the Babies' Dispensary, the Day Nursery, and various open clinics for babies at the public schools. In addition, a number of lectures were delivered by physicians including Drs. McClenahan, Roberts, Thos. Orr, Holbrook, Mullen, Morton, etc., and Miss Power, who is in charge of the Bureau of Child Welfare.

We hope to be able in a future issue to give a description of the work which has been done by Miss Power and her assistants in the City of Hamilton.

News Items

Homewood Sanitarium

The Nursing Class of 1917 at the Homewood Sanitarium, Guelph, had their graduating exercises on the afternoon of June 22nd. The class was as follows: Mrs. Charlotte Kirk, Mrs. Hattie Nelson, Laura McKay, Mary Trull, M. Hilbert, A. Milburn and Mrs. E. Woodall.

Wellesley Hospital

The Wellesley Hospital Training School for Nurses held its graduating exercises, Wednesday, June 27th, at the Wellesley Hospital, Homewood Place, Toronto. After the President of the Board, Sir William Mulock, who acted as chairman, delivered a short address, Miss Flaws, the Superintendent of the Hospital, read the annual report, which was considered very satisfactory by those present. Miss Knox, Principal of Havergal College, delivered a very interesting address, which was intended especially for the nurses, but was highly appreciated by all who heard it. His Honor, Sir John Hendrie distributed the diplomas and Lady Hendrie presented the school pins. The members of the graduating class were: Marjorie Batchelor, Laura Moore, Irene Williams, and Helen McCord, Toronto; Mabel Foster, Bloomfield; Grace McGowan, Elora; Dorothy Noble, Bradford; Llwella Heisey, Markham; Hazel MacInnes, Lindsay and Grace Wilson, Napanee.

Capt. Andrew MacPhail, M.D., Professor of Medical History at McGill University, who has been on active duty overseas for nearly two years, working in France and Flanders a good portion of that time, delivered the Cavendish lecture in London, England, June 22. He received special leave from France for the purpose. Dr. MacPhail spoke on "Canadian Medical Work at the Front," giving the details of the preparations required for the success achieved by the Canadian Medical Services at Vimy Ridge.

A dinner was tendered to forty of the St. John Ambulance Nurses at the Hunt Club, Toronto, June 30th. Among those who took an active interest in it was Dr. Copp.

The amount collected on Italian Red Cross Day, held recently, in Toronto, was $36,950. A cheque for that amount was sent to the President of the Italian Red Cross, in Rome, July the second.

Early in July there were about 7,500 invalided soldiers under the care of the Military Hospitals Commission in Canada. There were about 22,000 invalided Canadian soldiers in the United Kingdom, June 15th.

Mr. Phillip Garratt, son of the late Dr. Garratt, of Toronto, had a rather serious attack of pleurisy about June 1st, and was cared for in No. 1 General Hospital, London. According to letters written, June 17th, he was making a satisfactory recovery.

When warships are in harbor, one of them has a flag consisting of a white St. Andrew's Cross on a blue ground, hanging from her yard arm. This means that a doctor is on board, and that that ship is medically guarded for the time being.

We are informed that the aggregate supply of food in England about the middle of June was fairly satisfactory, but there were almost no potatoes, very little sugar, and a somewhat limited supply of milk and bread, the latter including everything that contains flour. It would appear that our soldier boys miss the sugar more than anything else. Let their friends, therefore, continue to send them as many sweets as possible.

Personals

Dr. Norman Allen, of Toronto, went on a motor trip to Buffalo, June 30.

Dr. Michael Clark, M.P., addressed a meeting in Windsor, June 23rd, on the subject of conscription.

Major Harold Parsons, M.D., of Toronto, left Saloniki early in June and reached London on or about July 1.

Dr. A. and R. D. Rudolf, of Toronto, are now in London, England, acting as consultants to the Canadian Hospitals.

Col. Herbert Bruce, M.D., of Toronto, was at British Headquarters at Havre, France, the latter part of June.

We are glad to be able to announce that Dr. Graham Chambers has recovered and is again on active duty, but not at Orpington.

Dr. A. J. Harrington, of Toronto, paid a visit to the north in June, and spent a portion of that month at Highland Inn, Algonquin Park.

Dr. Ingersoll Olmstead, of Hamilton, started for Cape Breton, Nova Scotia, June 28th. He expected to remain there about a fortnight.

Dr. F. A. Clarkson was the guest of the Perth Medical Society, at Mitchell, when he read a paper on "Treatment of Diabetes."

Drs. Chas. J. Hastings, J. W. S. McCullough, and J. J. Fitzgerald, of Toronto, went to Ottawa, June 28th, to interview the Government in certain matters pertaining to public health.

Lieut. Edward Leacock, of Toronto, was married to Dr. Francis Evelyn Windsor, daughter of the late Walter Windsor, Montreal, in London, England, June 30th. Dr. Windsor is on the staff of the Endell Street Hospital.

Dr. M. B. Whyte, who was for some time Superintendent of the Isolation Hospital, Toronto, has been appointed Director of Medical Services in the Public Health Department. He will still have control of the Isolation Hospital, but will also have charge of the school children and the various clinics established by Dr. Hastings.

Obituary

WELLINGTON COLEMAN JEFFERS, M.D.

Dr. W. C. Jeffers, of Lindsay, died July 15th, 1917, aged 70. He graduated M.D. from Victoria University in 1867.

CAPTAIN JAMES HENDERSON, R.A.M.C.

Dr. James Henderson died at his father's residence, 34 Brunswick Avenue, Toronto, after a very short illness from pneumonia, July 16th, 1917. He was a graduate of Trinity University. He was a veteran of the South African War, and during the last two years served with the R.A.M.C. in the Indian Expeditionary Force in France and Mesopotamia. He was at home on a short leave of absence when he contracted a cold which developed rapidly into pneumonia.

Another of our finest specimens of young Canadian manhood has been taken. A cable came to Toronto, July 18th, announcing that Flt. Sub.-Lieut. Fraser M. Bryans was killed in a seaplane accident at Folkestone, England. He was a son of Dr. W. F. Bryans, 230 Carlton Street, Toronto, a Jarvis Collegiate Old Boy, and a graduate of the School of Practical Science, Toronto University. While in the University he took an active part in sports and was one of the best footballers in Canada.

Book Reviews

Progressive Medicine, a quarterly digest of advances, discoveries and improvements in the medical and surgical science. Edited by HOBART EMORY HARE, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, assisted by LEIGHTON F. APPLEMAN, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Volume II, 1917: Lea & Febiger, Philadelphia and New York.

In this volume Coley deals with hernia, and Gerster with abdominal surgery, touching also upon abdominal wounds on the battlefield. Clark's résumé in gynæcology is a masterpiece. He sums up the position of radium in relation to uterine disease, placing it on a very high plane, and recommending it above surgery in inoperable cancer of the cervix. Stengel has an excellent article on the blood dyscrasias, and Jackson records the progress of the year in ophthalmology. This number is one of the best ever published.

Personal Health. By WILLIAM BRADY, M.D., Elmira, N.Y. 12mo. of 407 pages. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, $1.50 net. The Canadian Agents, The J. F. Hartz Company, 24-26 Hayter Street, Toronto, Ont.

On the title page of this volume it is called " a doctor book for discriminating people." It is an effort to place in the hands of the laity information on personal health and hygiene, without trespassing on the proverb that " a little knowledge is a dangerous thing."

As such it admirably fulfils its purpose, and we are sure that read by thinking people it should accomplish much good. It takes the place for the adult of such health instruction as is now given to children in most of the public schools. The scope of the book may be judged by the titles of some of its chapters, as " Catching Cold," " Heat and Ventilation," "What Shall I Wear?" "The Family Doctor," "First Aid."

Selected Article

THE USE OF RADIUM IN POST-OPERATIVE CONDITIONS

By Frederick C. Harrison, B.A., M.B.,
Assistant in Pharmacology, University of Toronto; Assistant Physician in Charge of Dermatology; St. Michael's Hospital; Assistant Dermatologist, Grace Hospital; Physician Toronto Hospital for Incurables.

During the past ten or twelve years the therapeutic value of radium has been proved in a great variety of pathological conditions. Beginning with the first clinical work in the treatment of superficial skin lesions, particularly the rodent ulcer, carried out at the Paris Radium Institute, the field has been gradually widened and extended, so that in many clinics and in all countries radiumtherapy has come to occupy a distinctive place for itself.

At first, as we have stated, its use was restricted to the more superficial conditions. Dermatology offered a particularly attractive field for experimentation with the newly discovered agent. It was found to be of distinct value in the treatment of a large number of hitherto very intractable disorders. Port-wine stains, nævi, angiomata, keratoses, chronic eczemas, keloids and cutaneous epitheliomata were very responsive to the action of the radium. Its action in skin cancer naturally led to its use in other malignant conditions, where suitable circumstances presented themselves. Obviously the first cases met with were those in which all other customary and tried measures had proved unavailing. Inoperable cases of cancer of the breast, cancer of the uterus, sarcomata, etc., were referred to the radium clinic as a *dernier resort,* and with, in many instances, most gratifying results. That is to say, in a very fair percentage of such hopeless cases favorable changes, both local and general, occurred, resulting in an amelioration of such distressing symptoms as pain, hæmorrhage, offensive discharge, with the healing of ulcerations and a distinct retardation in the spread of the malignant process. The best observers were if anything ultra-conservative and hesitated to

pronounce definite "cures." However, as time passed, it was evident that in certain cases one was justified in speaking of a cure, the disease having to all appearance disappeared for a sufficiently long period.

Such otherwise hopeless patients having been so much benefited, occasional reports began to appear where, as the method of choice, radiumtherapy was employed in the treatment of malignant growths. For superficial malignant lesions radium soon established itself as in every way the most desirable method of treatment on account of its ease of application without discomfort and inconvenience to the patient, and because of the excellent cosmetic results which were obtained. For deeper seated disease the greatest caution had to be exercised in order not to discredit the method before the profession. Over-zealous enthusiasts occasionally attempted the obviously impossible, receiving in consequence the censure of more sober thinking physicians and only causing the pendulum to swing so far the other way that, particularly among the surgeons, the use of radium was somewhat discredited. This period, however, soon passed over as it became more recognized that it had a tremendous power for good when applied in the proper direction. More particularly was it established that, far from being antagonistic to the surgeon's art, it was a most valuable adjunct, and offered the possibility of securing better permanent results in the surgery of malignant disease. Thus in many cases by a proper use of radium inoperable conditions could be so improved as to render it possible to perform a satisfactory operative procedure for the removal of a new growth; in other instances small localized recurrences after operation could be completely removed by a judicious use of this agent; in still other cases its use as a prophylactic against recurrences of the disease was found to be a most deciding factor in their prevention. This post-operative use of radium is now regarded by authorities the world over as a most important phase of radium therapeutics. It is this particular phase that we wish to discuss in this paper. Any personal observations recorded have been made in the practice of Dr. W. H. B. Aikins, of Toronto, during the past seven years that he has been using radium.

One may briefly indicate the physics and methods of application of radium. As used in therapeutics, one of its salts, usually the bromide or sulphate is employed. The changes

produced depend upon the energy given off by the salt in the form of rays, which are of three kinds, called the alpha, beta and gamma rays. The alpha rays are really positively charged atoms, material particles, about twice the size of one atom of hydrogen. They form about 90 per cent. of the total radiation, and are projected with a velocity of about twenty thousand miles per second, but as they have very little penetrating power, being easily stopped by a thin piece of paper or rubber, they do not ordinarily have much therapeutic value. The beta rays are negatively charged particles, projected with the velocity of light. They are almost identical with the cathode rays liberated in a vacuum tube. About 9 per cent. of the radiation is formed by these rays, which vary in their penetration, so that various gradations from "soft" to "hard" beta rays are encountered. The gamma rays form about one per cent. of the whole radiation, but they have great penetrating power. They will traverse quite readily as much as ten centimeters of lead. Their velocity is that of light, and they are a pulsation of the ether, being similar to the x-ray, from which, however, they differ in their far greater penetrative power.

By interposing screens of aluminum or brass of varying thicknesses the passage of different rays can be prevented, so that only the desired kind of radiation may be allowed to pass and exercise its therapeutic effect.

As supplied by the manufacturers radium apparatus is in two forms, the flat applicator and the tube. In the former the radium salt is spread out on a flat surface, and gives out its rays only in the one direction. For applying to large surfaces this is the best type of applicator. In the latter, 10, 25, 50 or more milligrammes of radium are enclosed in a platinum tube, which can be inserted directly into a tumor mass or into the various body cavities.

No absolutely satisfactory method of estimating the dosage of radium has as yet been determined. Many observers use the milligram-hour method, as suggested by Dr. Dawson Turner, while others prefer simply to state that they have used an applicator containing so much radium for a certain period of time.

The effects produced by exposure to the radium rays can be demonstrated histologically in the tissues so treated. In a study made by Aikins and Simon,[1] the following conclusions were drawn: In carcinomata: "(1) The cells gradually

diminish in size and staining properties. (2) This atrophy corresponds not to the metamorphosis of these definite formed elements, but to their destruction, as shown by keratinization or absorption. (3) The epitheliomatous cells disappear either by means of progressive absorption of protoplasm and nuclei through the leucocytic infiltration or by a sort of granular degeneration. The other processes associated with the development of every epithelial tumor are arrested, while vascular connective tissue is organized. (4) As proof that the changes initiated by radium in the tumors are such as to lead to immunity, great importance must be attached to the cellular infiltrations, first leucocytic, then later a round-celled. It has recently been shown that these require different reactions of the tissue for their function, hence radium must affect the blood. These infiltrations have always been noted in all cases of experimental transplantation of malignant cells, and always accompany the cases in which the animal becomes immune and the tumor disintegrated."

"In sarcomata, retrogression takes place according to the following law: (1) The size of the body and of the nucleus of the large cells decreases. (2) As they shrink the neoplastic elements elongate, the shape of the nucleus becomes regular, and they eventually assume the form of large embryonic connective tissue cells, forming into a celled mass similar to that of a true fibroma. Thus we may emphasize the fact that sarcomata are transformed by a radium into a tissue analogous to that of a fibroma with myxomatous changes."

Bearing these facts in mind it will be readily appreciated how logical are the reasons which led to the employment of radium as a post-operative measure after the surgical treatment of malignant new-growths. The penetrating power of the rays influences any cancer cells which have perhaps been left beyond the margin of the dissection, producing in them the retrograde changes just enumerated; while the possibility of a blood immunity to malignancy being occasioned by the use of radium should be borne in mind, difficult as it may be to thoroughly establish it.

Discussing post-operative conditions more in detail, cancer of the skin may be first considered. The basal-celled epithelioma or rodent ulcer responds so satisfactorily to the action of radium alone that operative measures are seldom necessary for its treatment. Occasionally to expedite matters the thick

beaded edge may be curetted, after which the application of radium soon results in healing with very little and hardly noticeable scarring. The squamous-celled epithelioma may also frequently be treated by means of radium alone, but if the growth appears to have invaded the subcutaneous tissues an excision of the mass followed by subsequent raying of the part is to be preferred. Such was the treatment adopted in the case of a colleague who was referred to Dr. W. H. B. Aikins over three years ago for an epithelioma on the right cheek just below the eye. A small portion removed for examination showed invasion of the subcutaneous structures by the cancer cells; consequently an excision was done, with subsequent radiation of the part. There has been absolutely no indication of return of the disease, either locally or in the glands of the neck, where metastasis might have been anticipated.

In epithelioma of the lip it has been found possible by a judicious combination of surgery and radiumtherapy to secure excellent results without causing the great disfigurement often occasioned by a wide excision of the mass. Not only should the affected area itself be radiated by the lymphatic channels draining from that area may with advantage also receive prophylactic radiation against the formation of metastases. As a case in point one may refer to a man fifty-five years of age, referred to Dr. Aikins in August, 1914, for an epithelioma of the lower lip, which had appeared three years before and been allowed to progress until, when first seen, almost the whole of the red surface of the lower lip was involved, presenting a central ulceration surrounded by a hard rolled edge. This was curetted, a heavy exposure to radium was given over the whole of the lower lip, complete healing subsequently taking place. There has since been no evidence of recurrence of the disease.

An interesting case of epithelioma involving the nasal fossa may be recorded, which occurred in the practice of the late Dr. Price-Brown, of Toronto. A growth had developed on the outer wall of the right nasal fossa, which on excision and examination proved to be a squamous-celled epithelioma. Following excision the base had been cauterized, but the growth recurred and several cauterizations had been done before the patient was referred to Dr. Aikins for radium treatment. "Cross-fire" radiation obtained by placing one placque externally, with another smaller one inside the nostril against the involved area—the total dosage being 100 milligram-hours—

resulted in a disappearance of the recurrence, and there has been no further development during five years.

Cancer of the buccal, lingual and pharyngeal mucous membrane is perhaps the most difficult of all manifestations of malignancy to respond to treatment. Excision where practicable should be done in every case. This, followed by a heavy post-operative radiation, has given good results in some cases of personal observation of which the following will serve as examples:

A patient, fifty-two years of age, was seen in October, 1913. She had an epithelioma inside the left cheek, following irritation from a tooth. The treatment advised was excision followed by post-operative radiation. The operation was performed by her local surgeon, who sent her back in two weeks' time for radiation. At the site of the operation a soft epithelial proliferation had already taken place, but there was no ulceration. By means of an apparatus held inside the mouth against the part and a placque fastened externally on the cheek heavy radiation of the part was given. When seen two months later, the mass which had been present had quite disappeared. All that could be detected of the presence of the growth was the scar at the site of operation. As such a length of time has elapsed one can reasonably regard the case as cured, the five-year interval hardly being necessary in such rapidly recurring growths as those of the buccal mucosa.

A man, fifty-three years of age, complained of a growth which he had noticed on the floor of his mouth for about two months. On examination a mass was found, clinically epitheliomatous, involving the frenum and the floor of the mouth. There were no enlarged glands to be detected. The mass was excised, examination proving it to be a squamous-celled epithelioma, and as soon as the sutures were removed a post-operative radiation was given of 130 milligram-hours. Three months and a half later there was no evidence of any return of the disease inside the mouth, but an enlarged gland was detected on the left side of the neck. This was radiated. It was over ten months before anything further was seen of this patient, at which time the gland was found to have completely disappeared. At the site of the former growth was a thickening which aroused suspicion of recurrence, but this completely disappeared after the further application of radium.

Dr. Robert Abbe,[2] of New York, has reported a similar

case of epithelioma of the frenum of the tongue, which after excision and radium application remained well after five years.

Another very satisfactory case was that of a man, aged fifty, who had an epithelioma involving the anterior portion of the palate, extending through into the nasal fossæ. As much of this mass as could be was dissected out, and subsequently very heavy radiation was carried out both in the mouth and in the nasal fossæ. The improvement was wonderful. The excision had been so incomplete that immediate recurrence of the growth was looked for by his surgeon; instead the parts became clean and have gradually healed over. There is no offensive odor or nasal obstruction, and apart from the perforation through the palate, he has completely recovered.

Cancer occurring primarily in the glands of the neck should be treated by excision of the involved area with strong post-operative radiation. It frequently happens that in this situation, owing to the firm attachment of the growth to important blood-vessels or nerves, it is impossible to obtain a clean dissection of the cancerous mass. The post-operative use of radium finds in such cases a field peculiarly its own. Such a case is reported by Abbe, in which there was a carcinoma at the root of the neck which had grown so tightly to the carotid artery that complete dissection was impossible. "Immediate post-operative use of strong radium for eight hours has resulted in immunity from disease for four years."

In the treatment of cancer of the breast the proper procedure is to operate when possible, and follow with radiation of the parts to prevent recurrence. This combined treatment is not new, as isolated observers have been advising it for some years. In 1911, Nahmmacher[3] in a paper on "Radium and Cancer," discussed the value of radium in operable cancer as a secondary treatment after operation. He referred to the fact that radium rays have an elective action on any cancerous tissue which has been left after operation, and that owing to their greater penetration they are more effective, besides being painless and giving a better cosmetic result, than the x-ray. He believes his results in cancer of the breast are better than other observers because of his practice of using radium in this post-operative manner.

Burnam,[4] also, in speaking of the use of radium in cancer of the breast, states that operable cases should have the combined treatment.

The writer can add his personal observations to those of

other authorities in support of this combined treatment for breast carcinoma. There can be no doubt from the patients treated in this way in the practice of Dr. Aikins that recurrences have been far less numerous than one would ordinarily look for. As a case in point may be mentioned a patient who nearly five years ago had a recurrence of cancer in the right axilla following amputation of the breast twelve years previously. It was found impossible to dissect the mass out entirely. She was immediately subjected to heavy post-operative radiation of the axilla. There has been no recurrence of the disease. Three years ago, carcinoma developed in the left breast. This was removed and the axillary glands of that side were found to be carcinomatous. Post-operative radiation carried out in the axilla and over the area of operation on that side has resulted in complete freedom from recurrence.

Another patient seen four years ago had carcinoma of the right breast, which had been removed three months before. Examination of the axillary glands revealed carcinoma cells present. As a prophylactic, her brother, a physician, wished her to have post-operative radiation, which accordingly was carried out. The result has been most gratifying, for whereas recurrence was looked for in view of the pathological findings, the patient has been quite free from any sign of return of the disease.

Within the scope of the title of this paper would also come those cases where small nodules develop along the line of suture after amputation of the breast. Radium treatment is here most effective in causing disappearance of the masses without recourse to further surgical procedures.

A patient, thirty-six years of age, had had the left breast removed for carcinoma in October, 1914. In May, 1915, she noticed some areas of thickening along the lower end of the line of incision. There were four separate nodules, each about as large as a split pea. Exposure of these points to 120 milligram-hours of radium treatment resulted in their complete disappearance.

When we come to consider carcinoma of the abdominal viscera, as distinct from disease of the pelvic organs, which will be considered more fully, the results are somewhat meagre. In carcinoma of the stomach or liver, Burnam[4] states that he has seen no definite cures, but that "it would seem that an intelligent combination of surgical and radiation treatment might lead to a very great improvement in the present methods of

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accompanying present day social and business activities, is causing an increase in low-grade inflammation of the nerves themselves.

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treatment." He also states that ascites due to abdominal cancer is occasionally completely done away with by radiation.

Cancer of the rectum when inoperable offers a particularly favorable field for the use of radium, and many observers report good results. Those cases in which an operation has been performed should receive post-operative radiation, no matter how completely the growth may have been removed. Frequently, of course, only a partial operation is feasible, and in such cases radium has a wonderful influence in diminishing the unremoved portion of the growth. Chase[5] reports a case in which an adenocarcinoma was removed from the posterior rectal wall, leaving, however, an area of infiltration extending for one-half the circumference of the gut. He radiated, using "cross-fire" action, and in six weeks' time no evidence of diseased tissue could be found. He says: "The use of radium after the removal of a malignant growth is of great importance to reach any remaining malignant tissue that in many cases one cannot identify."

Cancer of the uterus has, with the exception of the cutaneous epitheliomata, received more attention from the radium therapeutist than any other pathological condition, and a large amount of literature has accumulated during the past few years bearing on this particular problem. As we are concerned only with the post-operative use of radium there is no occasion to go fully into the indications for its application in cancer of the uterus. In inoperable cases there is universal evidence that the improvement following its use is remarkable. Pain is relieved, hæmorrhage and discharge arrested, and a shrinkage and fibrosis take place in the growth to such an extent that operation can subsequently be performed where previously it was contra-indicated. A few observers even go so far as to say that radiumtherapy should be the method of choice in the treatment of the disease. To this opinion we would not care to subscribe; but that a judicious combination of surgery and radiumtherapy is the proper procedure to be adopted in a large number of such cases is supported by reliable authorities.

Wickham and Degrais[6] believed that where complete extirpation was impossible, partial removal of the growth followed by applications of radium was the ideal procedure. They observed disappearance of cancer nodules, relief of pain, cessation of hæmorrhage and fœtid discharge, and disintegration of the cancer cells in the deeper parts of the malignant growth.

Abbe[2] has had several advanced cases treated by curettage

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and radium, which have remained without recurrence for three or four years.

Degrais[7] has more recently stated that after several years' experience with radium treatment he regards it as a most valuable aid to surgery, applied after curetting or partial or total extirpation, while Fabre[8] in a similar paper emphasizes the importance of radiumtherapy in tending to complete the surgical procedure and ward off recurrence.

Henry Schmitz,[9] in an exhaustive article on the use of radium in uterine cancer, states that prophylactic raying after operation to prevent recurrences is recommended by all workers in the field. He quotes Gauss who reported 21 such cases, of which 20 remained free from recurrence up to six years after operation, while usually sixty per cent. of the cases not receiving post-operative radiumtherapy show recurrences within the first year.

Concluding a paper on radium achievements and speaking of uterine cancer, Howard Kelly[10] advises radiation after operation, where the latter is feasible.

The technic in treating uterine cases is deserving of consideration. It is desirable to use only the more penetrating rays, which have been shown histologically to exert their effect to a depth of three and a half inches. The irritating and destructive action of the softer rays is to be avoided, for extensive sloughing might otherwise occur. The radium is contained in platinum capsules and further screened by being encased in rubber, and is applied to the cervix or into the body of the uterus as the case may be. Authorities differ as to the dosage to be given. Some advocate long exposures to a large quantity of radium, but there is no doubt that very unpleasant toxic reactions frequently develop after such heavy dosing. An exposure of from 600 to 750 milligram-hours, repeated at intervals of four to six weeks, has been found to give good clinical results.

As examples the following cases may be reported:

In 1911 a patient was referred to Dr. Aikins suffering from cancer of the cervix. Operation had been refused by one surgeon who gave her six weeks to live. A second surgeon curetted, but gave no better prognosis. On the bare chance of relieving her to some extent, radium was used. The results were most gratifying. She had previously had frequent hæmorrhages, but these ceased after the first application. She put on weight and was able to resume her usual duties.

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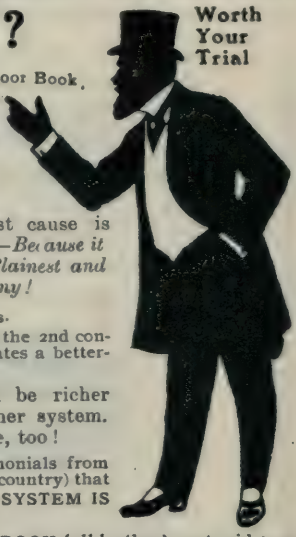

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Locally a marked fibrosis was produced. Unfortunately, five years later a metastasis developed in the liver, which proved fatal. The patient in the meantime had enjoyed five years of life, which in view of the hopeless state she was in when first seen we regarded as directly due to the radium treatment she had received.

A patient suffering from cancer of the body of the uterus was referred in March, 1915. A hysterectomy was to be done, but on opening the abdomen her surgeon found such an extension of disease into the left broad ligament that he thought it wiser not to proceed. He cauterized the uterine cavity and cervix and sent her to Dr. Aikins for radium treatment. This has been carried out at intervals of six weeks, and up to the present there has been no evidence of activity of the disease.

In the treatment of cancer of the vagina or vulva post-operative radiation also plays a valuable role, and should always be carried out. The writer has seen two such cases where the results obtained were excellent.

The first was a woman of twenty-nine, who, four years ago, had a carcinoma of the vulva excised. Following the operation there was a development about the scar of a very suspicious area of induration. She was therefore referred for radiation two months later. The response to radium applied over the whole of the involved area and also over the inguinal glands was most satisfactory; the thickening subsided, and there has never since been any sign of recurrence of the disease.

The second patient was an elderly woman of nearly eighty, who had an epithelioma of the right labium. The growth was excised, and also the inguinal glands on the right side. She was referred and received prophylactic radiation. Six months later the glands in the left groin, where no radiation had been given, began to enlarge. They were excised and showed metastatic deposits of a squamous-celled carcinoma. Radiation given subsequent to the operation resulted in freedom from recurrence of the metastasis, which in view of the extensive glandular involvement found at the time of operation was regarded as highly satisfactory.

So far we have considered only epithelial new-growths, but the beneficial results from radium apply also to the sarcomata, and in treating many such cases the combined use of radium and surgery is particularly effective. It frequently happens that an incomplete operation is all that can be performed in the removal of a sarcomatous mass. The introduction of

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radium tubes into the wound, with external application to produce a "cross-fire" action, is most valuable in such a condition and should never be omitted.

Certain types of sarcoma cells are more readily influenced by the radium rays than others; the small round-celled sarcoma and the lymphosarcoma responding more readily. It is claimed by Morson," that if growing from tissues other than bone the spindle-celled sarcomata respond as readily as do the round-celled.

Certainly the results obtained in the following cases, which may be taken as examples, strongly support the opinion just pronounced.

In an infant a few weeks old, a spindle-celled sarcoma developed at the side of the anus. Two operations had been performed, but the mass immediately recurred. Following the application of radium over the wound, complete healing resulted. There has been no recurrence in over six years.

A gentleman, sixty-one years of age, had had two operations for the removal of a sarcoma which had developed just below the angle of the jaw on the right side. A third operation was performed in London, England, in 1910, and a week later he received heavy radium treatment from the late Dr. Wickham in Paris. He was referred to Dr. Aikins by Dr. Wickham for further prophylactic radiation. This was carried out, and at no time since has there been any return of the growth.

A patient, female, had had a round-celled sarcoma removed from the left jaw; the growth involved the antrum and complete dissection was not possible. Post-operative radiation was given by means of radium in tubes, passed into the antrum. There has been no recurrence in over eighteen months.

A female patient, twenty years of age, was seen first in January, 1916. There was a growth on the inner aspect of the right arm of six months' duration. A skiagraph revealed a fusiform mass apparently involving the shaft of the humerus. The diagnosis was sarcoma, and amputation at the shoulder was advised. On further consultation it was decided to excise the mass and then radiate. At the operation a mass attached to the bone, but not involving it, was removed. Examination showed it to be a round-celled sarcoma. Radium tubes were inserted directly into the wound down to the bone, while placques were applied externally. The wound healed perfectly, the patient made an uneventful recovery, and there has

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not been any evidence whatever after over a year's time of recurrence of the growth.

From the clinical evidence one has received in the study of such cases, and many others which it is unnecessary to note in detail, the importance of post-operative radiation is more and more impressed upon one. Nor should there be any undue delay in carrying out such procedure. In some cases radium is applied directly after operation. In other cases it may be desirable to allow an interval of a few days to elapse, but to wait until there is some sign of recurrence before consulting the radium therapeutist is to be unequivocally condemned. Many authorities, to some of whom reference has already been made, emphasize strongly the importance of early post-operative radiation. There is no doubt that surgeons, too, are becoming more strongly convinced of the necessity of this extra safeguard in the treatment of their cases of malignancy. To quote Wickham and Degrais[12]: "Can radium aid surgery in the treatment of malignant tumors? Our answer is wholly affirmative. Most assuredly radium can give valuable aid to surgery in the treatment of malignant tumors. Immediate operation is recommended in all operable cases, raying the area afterwards to completely extirpate the last cells of the growth."

References.

1. Aikins and Simon, *Dominion Medical Monthly,* September, 1914.

2. Abbe, *Lancet,* August 23, 1913.

3. Nahmmacher, *Wien. Med. Klin.*, 1911.

4. Burnam, *Johns Hopkins Hospital Bulletin,* May, 1915.

5. Chase, *Long Island Medical Journal,* July, 1915.

6. Wickham and Degrais, "Radiumtherapie," 1912.

7. Degrais, *Annales de Gynecologie et d'Obstetrique,* Paris, XLI. No. 5.

8. Fabre, *Annales de Gynecologie et d'Obstetrique,* Paris, XLI. No. 5.

9. Schmitz, *Surgery, Gynæcology and Obstetrics,* Vol. XX. No. 1.

10. Kelly, *American Journal of Surgery,* March, 1916.

11. Morson, *British Journal of Surgery,* 1915, p. 354.

12. Wickham and Degrais, 17th International Congress of Medicine, 1913.

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—*International Journal of Surgery.*

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Miscellaneous

The Neglected Therapy of Convalescence

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hæmatinics in this form, is that digestive disturbance is avoided and constipation is not induced.

Pronounced cholemia, unless it be acute, makes an operation a hazardous procedure, especially in the aged. In spite of it, operation may be imperative. To minimize its dangers the bleeding and coagulation time should be watched from day to day, blood coagulents should be employed pre-operatively and, when the obstruction is due to stones, one may often wait for a subsidence of symptoms, with a much better prospect of a recovery. When the cholemia is due to carcinoma operation should be avoided.—*American Journal of Surgery.*

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Willie was out walking with his mother, when she thought she saw a boy on the other side of the street making faces at her darling.

"Willie," asked mother, "is that horrid boy making faces at you?"

"He is," replied Willie, giving his coat a tug. "Now, mother, don't start any peace talk—you just hold my coat for about five minutes."—*Medical Fortnightly.*

A Modern Soliloquy—Virginia Fisk Green

To cut or not to cut; that is the question;
Whether 'tis wiser for an o'er racked frame to suffer
The tortures and outrages of 'pendicitis,
Or to take knife against the surly monster
And by curtailing, kill it. To cut, to slash:
What more? And by that slash to put an end
To pain and wipe forever off the slate
That dreaded organ: 'tis a consummation
Devoutly to be wish'd. To cut, to slash:
To slash, perchance to death: ay, there's the rub!
For in that slash so keen may lie the power
To make us shuffle off this mortal coil.
Our too, too solid flesh might melt,
And we might fain resume existence, when
We had it not. Doctors and wielders of
The knife protect us! Till the damn'd thing lies
At rest in alcohol—and then we thank thee!—*Pacific Pharmacist.*

Health Note

Hopkins's wife has a fad for all manner of things sanitary. She came across an interesting item in the evening paper and promptly communicated it to her husband.

"An eminent medical authority," she said, "claims that a dentist's fingers carry disease germs."

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Surgical Suggestions

Frontal or ethmoid sinus suppuration, causing headache and fever, may easily be mistaken for typhoid, especially in children, if the physical examination has not been thorough.

Some individuals of seventy are as feeble, physically and mentally, as many at ninety, and, on the other hand, one often sees people of eighty as vigorous and healthy as the average at seventy. Medically, therefore, we should consider as "aged" those who are very old in their tissues and functions, no matter how old they be in years.

Colostomy and gastrostomy for inoperable cancer are, with proper indications, legitimate operations; but their nature should be explained to the patient himself if his mind is clear, and he should be allowed the opportunity to decide whether or not he will accept what the surgeon can give him in exchange for what he takes away.—*The American Journal of Surgery.*

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Original Communications

THE VALUE OF THE WASSERMANN REACTION IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS WITH SOME REMARKS ON THE TREATMENT OF SYPHILIS *

By Drs A. Schuyler Clark and R. S. Nelson, of New York.

The value of the Wassermann reaction resolves itself into the two questions: First, its value in the diagnosis of Syphilis and, secondly, its value as a gauge of the effect of treatment.

Our knowledge of syphilis can well be divided into all that period that preceded Schaudinn and Hoffmann's discovery of the Spirochæta Pallida in 1905; followed in 1906 by Wassermann, Neiser and Bruck's demonstration that the Bordet complement fixation experiments were applicable in the diagnosis of syphilis, a period that has been aptly called "the dark ages" of the Syphilitic Era—and the ten or eleven years that have supervened since these discoveries were announced, during which latter time our knowledge of syphilis as a disease has been tremendously augmented and its causative relation to many other infirmities definitely determined.

To-day, the syphilographer should know the anatomy, physiology and chemistry of the whole human body, so great are the ramifications of this disease, exactly as it is said that the dermatologist should know the skin and all that is within it, in order to be able to appreciate his opportunities.

But the ever present help in time of trouble out of all this syphilitic maze is the so-called Wassermann reaction which

* Read at meeting of Ontario Medical Association, Toronto, June, 1917.

stands to-day after ten years of a tremendous use and abuse, as a sheet anchor in the diagnosis and treatment of syphilis. The Wassermann reaction in its truest sense may not be considered an antigen anti-body reaction, and yet it shows and measures nature's response to the invading host. It is a reaction between the lypoids in the antigen and the lypotrophic immune bodies in the blood serum of syphilitics.

1. Craig states that these immune bodies vary from time to time, even from to-day, in known syphilitics, hence the importance of repeated tests in cases that give a negative reaction under certain conditions.

It is not the object of the present paper to enter into a detailed discussion of the technical aspects of the Wassermann reaction but, it would seem proper at this time to call to your attention a few facts which may aid to a better understanding of terms used, the various materials employed, methods of standardization, quantitative readings of results, etc., particularly the latter, which has caused much confusion among clinical men.

A number of different antigens have been used successfully in the Wassermann reaction. The original one, namely, saline extract of syphilitic fœtal liver, has been entirely replaced by alcoholic extracts of various organs (guinea pig hearts, beef hearts, human hearts, etc.). Noguchi's acetone insoluble antigen has also been found very serviceable. Some workers have reinforced these various alcoholic extract antigens by the addition of cholesterin (4 grms. to 100 cc. of extract), in this way rendering them more sensitive and, therefore, more serviceable in detecting weakly positive reactions. Many objections have been raised to the employment of cholesterinized antigen, the principal one being that it gave false positive reactions. This latter objection is probably in many instances a justifiable one.

However, most workers agree that proper standardization of cholesterin antigen together with preliminary, accurate titration of complement and amboceptor will in most instances eliminate the sources of error which are responsible for false positive reactions. Cholesterin antigen obviously should never be used alone since a weekly positive or even negative serum (previously determined with plain alcoholic extract) will often give almost or even complete inhibition of hæmolysis with cholesterin antigen. Antigens of this type should, therefore, be checked up by use at the same time, of a plain

alcoholic extract antigen which has been thoroughly tested and standardized. In other words, a serum which is positive only with cholesterin antigen should be considered doubtful in the absence of specific history or manifestation, but, in the presence of known specific history and symptoms it may be interpreted as weakly positive. Cholesterin antigen has been found of special value in determining the progress of treatment in syphilis. We frequently find that a known syphilitic serum will remain positive on cholesterin antigen long after it gives a negative reaction with the non-cholesterinized variety. The presence of such a reaction indicates further treatment. All antigens before being used should be standardized and certain requirements must be fulfilled in order that they may be considered satisfactory. The reliability of the reaction depends largely on the care used in the standardization. All well directed laboratories of to-day observe certain rules when determining the value of any antigen. If it were possible to establish a uniform procedure in determining unit values of all ingredients used in the Wassermann reaction, we are sure there would be fewer discrepancies in reports and less confusion regarding the true merits of the test.

What has been said in regard to the necessity for care in selection and standardization of antigen holds equally true in determining the unit values and reliability of complement and amboceptor. Here, also, there is a necessity for uniformity. At present, there is a divergence of opinion among serologists in regard to the establishment of a uniform procedure for determining exact amounts to be used in the test. All agree that such a course is desirable but, each having implicit faith in his own method, the attempt has not in the past met with any great amount of success.

It is hoped that some time in the near future a uniform procedure will be adopted by all workers.

The necessity for proper controls in the Wassermann reaction is, of course, very evident. The actual steps are much too complicated for discussion here. The antigen, complement, and patient's serum should all be tested for anti-complementary and hæmolytic properties. These control tests are set up with rest of reaction. In addition to these we have positive and negative controls. All are equally important and should be used at all times.

The judging of the strength of a reaction is very important and is deserving of more consideration than has been given it.

The lack of a uniform method of quantitative readings has led to much confusion. Here again we have emphasized the necessity for uniformity. The method of Citron is now widely used. Here an additional tube is added in which are placed half amounts of antigen and patient's serum—the other components being added in full amounts. When we obtain complete absence of hæmolysis in first and second tubes the reading is strongly positive. Complete absence of hæmolysis in first tube but hæmolysis in second tube is interpreted weakly positive. Where hæmolysis is complete in both tubes the reaction is, of course, negative.

2. The New York Board of Health, using an alcoholic extract of guinea pig's heart, interprets the results after the following table:

Amount of Hæmolysis.	Diagnosis.
86½ to 100 per cent.	"Not proven" (single test).
Not more than 87½ per cent.	Doubtful (normal persons may give it).
Not more than 75 per cent.	Faintly positive, suspicious grounds for continual observation.
Not more than 50 per cent.	Positive if observed first two weeks of supposed infection or, if subsequent to known syphilis (history of present clinical symptoms).
Not more than 25 per cent.	Nearly always positive, even without history or clinical symptoms.
Not more than 12½ per cent.	Always positive, even in absence of history symptoms, when other conditions known to give positive reactions are excluded.

In interpreting a cholesterinized antigen Wassermann in comparison with an alcoholic extract antigen Wassermann it is needless to say that when the latter is positive to any degree, the former almost always is. A few exceptions have been noted by Ottenberg of New York. He found a certain per cent. of sera which gave positive reactions to plain alcoholic extract antigen but negative with cholesterin antigen. When the alcoholic extract is negative and the cholesterin but faintly positive it has comparatively little diagnostic significance; when strongly positive on cholesterin antigen and doubtful or negative on simple alcoholic extract it certainly indicates further investigation.

While we most certainly cannot dogmatically declare that a positive Wassermann invariably means syphilis and a negative Wassermann means the absence of it, weighed in conjunc-

tion with the history and clinical manifestations, still bearing in mind certain pathological and chemical modifications that up to the present time have been determined for it, the reaction when present *can be considered most excellent corroboration* of a *syphilitic infection.*

The Wassermann reaction has been found positive in the following diseases, in the absence of other historical or clinical manifestations of a concomitant syphilis: In scarlet fever, malaria in the active stage, diabetes when acidosis is present, tuberculosis, cancer, leprosy and yaws. That there may be others, we cannot deny, though for ten years clinicians all over the world have been trying to find them.

On the other hand, that yaws may be closely related to syphilis, that a cancer may originate on a syphilitic cicatrix or, that syphilis be concomitant in malaria, scarlet fever, diabetes or tuberculosis, are certainly within the realms of possibility.

But, granting, if you will, that all these diseases are capable of producing the Wassermann phenomena, each and every one of them possesses characteristic clinical, pathological or histological features which place their diagnosis beyond a peradventure and, if they are excluded in the presence of a pronounced Wassermann reaction, the diagnosis of syphilis to-day is indicated with or without historical or clinical support.

A negative Wassermann reaction occurs in a percentage of known syphilitics.

Various chemicals introduced into the body or manufactured within it, modify to a greater or lesser extent the Wassermann reaction. Alcohol, choloroform and ether are known to render a positive Wassermann negative temporarily. Mercury and arsenic have even a permanent effect in negating the reaction. Iodide of potash is claimed to reduce it, but in our experience the seriological effect is comparatively slight and transient, and the benefit derived from its use in tertiary syphilis, particularly of the gummatous variety, in conjunction with mercury, is a resolvent and eliminant. As has been said, variations of the reaction from day to day have been observed due to changes in the complement binding substances in the blood.

Even considering the above named influences, a most careful technique and an ability to properly read the result of a Wassermann reaction (negative results are frequently obtained under the following conditions):

I. The incubating period prior to the appearance of the initial lesion (always negative).

II. In the early primary period. (It usually becomes positive before the secondary rash. Many positive reactions have been obtained in the fifth week after the appearance of the chancre and a few reactions earlier. It may not, however, become positive until after the secondary rash has developed.)

III. In some cases of tertiary syphilis even in the presence of active syphilitic manifestations.

IV. In a number of cases of latent syphilis, whether spontaneous or induced by therapy.

V. In some cases of central nervous syphilis. Here we can resort to tests of the cerebro-spinal fluid which may be positive, even when the blood is negative.

VI. In a few cases of malignant syphilis, when its absence is of a bad prognosis, showing little combative effort on the part of nature to resist the infection.

Craig states that the reaction in the blood is positive in

90 per cent. in the later stages of primary syphilis.

95 per cent. or more of secondary syphilitic cases.

87 per cent. of tertiary cases.

70 per cent. in latent syphilis cases.

95 per cent. of the cases of congenital syphilis in the early stages, and 50 per cent. or more in the later stages, which about parallel the condition in secondary and tertiary lues in the adult, and to which it actually corresponds.

98 per cent. in paresis.

70 per cent. in tabes.

50 per cent. in cerebro-spinal syphilis.

Fordyce (refer *New York Medical Journal,* September 26, 1914) has found the Wassermann positive as early as two weeks after the appearance of the initial lesion, but states that it usually does not occur until after the fourth. He has found it positive in 100 per cent. of his secondary cases and in 95 per cent. of tertiary cases with lesions present.

Boas found that the Wassermann usually became positive from the sixth to the eighth week after the initial sore appeared.

The reactivation of a negative Wassermann by an injection of salvarsan, as first suggested by Gennerich and Milian, is now a well-known phenomena and has been found useful by many syphilographers in the diagnosis of certain obscure cases of syphilis with negative or indeterminate reactions.

Provoked Wassermanns occur usually from the second to the seventh day after the injection, if at all. Fordyce finds them usually after 24 hours, but has observed the reactions as late as the tenth day.

In our clinics the blood is taken on the first, third, fifth, seventh and fourteenth days after the provocative salvarsan, and we have come to lay considerable store on the results of these tests in diagnosis and as a guide to further treatment after a suspension of our activities for several months.

In suspected primary syphilis a two, three or four plus reaction is considered positive; a one plus doubtful or negative. A positive on a cholesterinized antigen only furnishes grounds for further tests or a provocative Wassermann.

A negative Wassermann even repeated, is not grounds for denying a lues. Fortunately, in the primary stage an examination of the lesion for spirochætæ is a more reliable test, especially if a dark field illumination examination is made. Serum for this test should be obtained from the deeper portions of the chancre since the organisms are found to be more abundant here.

In secondary syphilis the test has never given doubtful or negative results in our hands.

In tertiary syphilis with suspected clinical signs or symptoms a three or four plus reaction is read strongly positive; a one or two plus Wassermann gives grounds for further tests or a provocative salvarsan but is not determinative. A doubtful one plus or a negative result, even when repeated, with a provocative Wassermann cannot absolutely deny tertiary syphilis, as against clinical evidence under the eye of a trained syphilographer.

Supported, however, by Noguchi's luetin test, one has more than a leg to stand on even in the absence of positive blood findings, as one of us (Clark) has demonstrated.

In latent syphilis with old signs or history, repeated negative reactions, negative provocative Wassermann and a negative luetin test speak for a probable cure, but are not infallible. One or two plus reactions are grounds for further serological investigations.

In persistently doubtful cases a test treatment should be instituted, and Whitehouse and Clark were forced to believe that skin lesions refusing to heal after the administration of five properly administered salvarsans were not then to be considered specific.

In early hereditary syphilis the Wassermann has been regularly three or four plus and usually distinctly positive at some time in the mother.

Latent hereditary syphilis behaves in a similar manner to that form when acquired.

Larkin and Lery of New York demonstrated that the Wassermann is practically always positive in aortic aneurysm, and have seen a negative reaction in the face of strong clinical evidence supported at the autopsy table.

Visceral syphilis, because of its rich blood supply, usually gives a good reaction, but on the other hand syphilis of the bones and joints not infrequently seems to give a weak or negative one, probably for the reverse reason.

As a guide in treatment the blood Wassermann has shown to be of inestimable value. In the "dark ages," the clinical symptoms were our only guide, and many cases relapsed that might have gone on to a cure, if treatment had been persisted in. Other cases, especially of primary and secondary syphilis, were over-treated because we were afraid to stop short of the arbitrary three or five-year limit set for our guidance.

In primary syphilis, treatment instituted on the demonstration of the spirochæta pallida and before the Wassermann appears, frequently prevents a positive Wassermann and secondary symptoms ever showing. If the reaction on repeated examinations over a period of one year from the cessation of treatment with a negative provoked Wassermann, spinal fluid and luetin at the end of that year, we believe we are justified in pronouncing a cure.

In the late primary period or in the secondary stage after the Wassermann has become established, a two-year period of similar observation from the time treatment is discontinued would seem to give a safe margin for error.

In tertiary and latent syphilis an intensive treatment for three years, if necessary, to produce a negative Wassermann, is recommended with a two-year observation as above and yearly or bi-yearly examination for years afterward.

A Wassermann reaction that remains positive after such an attack would seem in our series of cases to point strongly to an involvement of the arterial or central nervous system.

Only during the more recent years have syphilographers realized that the central nervous system is frequently involved as early as the secondary stage in syphilis. Various writers have reported positive findings in the cerebro-spinal fluid in the

secondary stage in 60 to 70 per cent. of their cases examined; Engmann in 10 per cent., Altman and Dryfus in 78 per cent., Wild in 66 per cent., Draper in 100 per cent., Nonne in 40 per cent., Swift and Ellis in 36 per cent., and Fordyce in 20 per cent. Certainly, then, even in this early stage, an examination of the cerebro-spinal fluid is indicated in the presence of severe headache, increased knee jerks, ocular, oral or other symptoms pointing to the central nervous system, but we prefer to do this after an intensive general anti-syphilitic course of treatment has been instituted.

Equally certain, an examination of this fluid is indicated before any case of syphilis is discharged as cured or relieved from observation.

In determining the Wassermann reaction in the spinal fluid it is to be borne in mind that the fluid in cerebro-spinal syphilis and tabes sometimes contains a smaller amount of immune bodies, but, that it is not anti-complementary when used in larger amounts, as compared with the blood serums. One of us (Nelson) therefore uses 0.2-0.5, 1 and 2 cc. of spinal fluid, and in reporting his result states, the smallest amount that produces a more or less complete inhibition of hæmolysis. In using the larger amounts up to 2 cc's. it is important to determine that the control does not show any anti-complementary properties.

Allowing for the aforementioned variations, a positive Wassermann reaction in the cerebro-spinal fluid means syphilis of the central nervous system.

In paresis and tabo-paresis, observers generally agree that the fluid is positive with the smaller amount 0.2 cc. in 95 per cent. of the cases and in 100 per cent. with the larger amounts. (The blood is also positive in almost 100 per cent.) In cerebro-spinal syphilis the fluid is sometimes negative even with the larger amounts, but in the smaller amount it may be negative in 40 to 50 per cent. The blood is positive in about 70 to 80 per cent. of cases.

In tabes with the smaller amount of fluid a positive Wassermann results in only about 20 per cent.; with the larger amounts it is positive in a far greater percentage. It is certainly negative in a number of cases in the quiescent stage.

These facts make it reasonable to suspect a paresis when the fluid gives a strongly positive reaction with 0.2 cc.'s of the fluid. One must bear in mind that here too, the immune bodies may vary from time to time and negative results in

suspicious cases indicate repeated examinations of the spinal fluid.

Specific cerebral arterio-sclerosis, even in the presence of pronounced nervous symptoms, unless there is a secondary meningitis present, does not usually show a positive Wassermann in the spinal fluid, but the blood is quite regularly positive, indicating, of course, a general anti-syphilitic therapy rather than by the subdural route.

An increased cell count, an increased globulin content and a paretic curve in Lang's colloidal gold test in the fluid are supportive evidence in the presence of a positive Wassermann. The two former, it must be remembered, occur in various inflammatory conditions of the meninges, but the latter, if reactions in the paretic zone only are considered, is believed to be by Miller of Johns Hopkins a specific reaction and indicative of paresis, even in the incipient stages.

As so much has been written on the treatment of syphilis and so many syphilographers have their own pet system of treatment, a rough declaration of the scheme used in our clinics at the New York Post Graduate Medical School and Hospital and the New York Skin and Cancer Hospital might be of interest to this society.

Suffice it to say that this scheme has survived after five years, because it has produced results in our hands that at least compare favorably with reports of results from other institutions. Modifications have been made from time to time to suit individual cases, but in the long run it is applicable to most cases as they present.

Salvarsan and mercury are, of course, the sheet anchors; the former, intravenously and the latter intramuscularly, but they are given intensively and during separate and distinct periods. They are so given because we believe individuals and strains of the specific organism do become "fast" to either of these remedies, and if one is given up to a point of probable increased tolerance, the remaining undestroyed spirochætes can be attacked from another angle by the other remedy with a degree of hope that further and serious inroads may be made into the already vitiated remnants of the ranks of the enemy.

A third and most important period of the treatment is the "tonic period" when iron, cod liver oil, nourishing food, fresh air, exercise and, if possible, a rest from toil and care and a change of air, are prescribed to relieve the secondary anæmia that invariably results from the disease itself and from an

intensive mercurialization—to build up the general constitution and give nature a chance to play her very important part.

A general course of treatment then consists of 6 or 8 or 10 salvarsan injections at five to seven days intervals, in doses varying from 2½ to 5 decigrams, immediately followed by twelve to fifteen weeks of mercury administration, or up to such time when the patient begins to show signs of depreciation, debility, pallor and pains from its administration. The amount varies from a grain at the beginning up to 2 or 3 and even 4 grains when the salicylate is employed, at weekly intervals. The third or tonic period follows directly the mercury administrations and leaves the patient after six weeks to two months well and fit for another such course if the Wassermann reactions then indicate.

In primary syphilis one such course frequently results in a cure, frequently enough certainly to justify us in watchful waiting.

In secondary syphilis two such courses are administered; the Wassermann is regularly negative at the end of the first but, so many relapses have been observed on our service that we do not feel justified in running a chance of losing valuable time in this stage of the disease.

In tertiary and latent syphilis as many courses are given as are indicated by the Wassermann, but not less than two nor more than four. When the Wassermann remains positive after the latter number a somewhat modified course of treatment is administered at yearly intervals.

In the absence of salvarsan, Schamberg's arseno-benzol has been found a most satisfactory substitute in our clinics.

In private practice the soluble cyanate of mercury given daily or every other day is an excellent preparation with which to keep a patient up to the point of mercurial tolerance.

Politzer's formula for the salicylate (mercury salicylate 5 grams, anhydrous lanolin 1½ grams, olive oil up to 15 grams) seems to cause the patients less discomfort than any other preparation that has come under our observation. Doses of over 4 decigrams of salvarsan or possibly 5 decigrams in large individuals, do not seem to be well tolerated. Occasionally, one finds an absolute intolerance to the drug. Iodide of potash in large doses up to 45 to 60 grains in considerable amounts of water, before meals, is given in certain tertiary cases, particularly with gummatous manifestations and nervous symptoms, during the mercury period.

Whitehouse and Clark determined to their satisfaction that salvarsan was more effective than the neosalvarsan.

Salvarsan is contraindicated in florid, secondary lues until the rash has about disappeared; in aortic aneurysm, severe arterio-sclerosis with high blood pressure, active nephritis and diabetes and severe debilitating or wasting diseases.

Syphilis of the central nervous system has been treated for the past eighteen months by the combined Swift-Ellis and Ogilvie methods. The latter in our hands seemed more effective than the former when used separately but, when it was found that the amount of salvarsan in serum salvarsanized in vivo (Swift-Ellis method) could be practically ignored in determining the amount of salvarsan that might be added to it in vitro (Ogilvie method), and considering the brilliant results reported by observers with the former method, a combination of the two was instituted.

The intra-spinal injections are given at two to three-week intervals and in doses of from 1-20 to ¼ of a milligram.

Cases of tabes with bladder symptoms do not tolerate larger doses or more frequent intervals, but in paresis Fordyce gives as much as ½ milligram at weekly or ten-day intervals.

A course of ten such treatments in sequence is usually prescribed. When the patient shows a positive blood Wassermann also, a course of intensive mercurial and iodide of potash treatment precedes the subdural injections. When the intraspinal injections are instituted, the patient is given an intravenous injection, his blood is withdrawn, centrifuged, and that serum used as a vehicle for the additional salvarsan in the Ogilvie part of the method. In cases showing no general reaction, another patient far advanced in his cure is given an intra-venous salvarsan and his blood is withdrawn and his serum used as the vehicle for the additional salvarsan. Inactivation at 57 degrees centigrade is practised for 40 minutes in either method of preparation.

With these precautions, the sub-dural route seems to be a perfectly safe method of treatment of central nervous syphilis and eminently effective if administered in the early stages of central nerve involvement. Needless to say, the results in later stages depend on whether it is a meningeal or interstitial inflammation, or one of the real parenchyma, in which latter case, the destruction has already been done.

DIFFICULTIES OF RURAL MEDICAL OFFICER OF HEALTH*

By Dr. D. A. Kidd, Trenton.

It has been a pleasure to the writer to have attended these conferences to listen and to meet with faces of former days.

To make our meetings profitable we need discussion of questions which interest us all. This paper is not a know-all one, and may seem somewhat arbitrary, but it should draw out some points worthy of your serious consideration.

What then is the spirit of the people with whom we have to work? One thing we do know, and have many examples of, is that they love liberty, especially do you notice that virtue about the time you place a quarantine card on the door of their dwelling. But they have shown it in this great war at Ypres and Vimy Ridge in France, besides at Paardeburg in South Africa. Canada, the home of the free, does not take to restrictions unless it be shown clearly that such are of great benefit.

Farmer Quarantined.—Let us consider a farmer quarantined—his family has infection—he has a large herd of cows, milking, what are you going to do? Why tack up a card of course! But this is the easiest part of your work. The milking, feeding and watering of these is no small matter. Several members of the family are accustomed to aid in milking, the milk goes to the factory, the farmer says he is nearly out of hay and chop, he has a load of hogs ready to market, he has a horse sold which is ready to be delivered at a certain date, he has apples to pull in an orchard some two miles away before the frost. He puts you up against a lot of propositions that require an answer. If you do not take time to properly answer them, he may say cuss words about you and all the health laws that were ever framed. He may damn all the makers of laws and all the executive of the same from A to Z. Is there any wonder at it? Place yourself in his position, and you might say more than your prayers. Well, you say, throw the milk to the pigs and let the Board of Health pay for it. You would, and so raise the man's taxes. You know

* Read at meeting of Ontario Health Officers' Association, Toronto, May 29-30, 1917.

milk costs money these days of war, taxes are high now and you are going to make them more, and to no purpose, the farmer thinks. He says they used to *not* quarantine for such disease in the good old days when he was a boy. He says it is just a piece of officiousness on your part and that there is no need of such nonsense. No, do not throw out the milk, try to get some one or two of the family isolated, disinfected and domiciled in good quarters, be kind and show consideration and sense and not the nonsense of the situation.

Another Farmer.—Again, it is Fall and the threshing mill is coming on a farmer's line. Can he go to his neighbor's threshing if he does not go into the man's dwelling? No, well how is he to get hands when his own is being done? If he does not get his done now he will not have a chance of the mill again till winter and his feed will not hold out till then. Let him hire a man. He cannot get a man for various reasons. Men are scarce, besides he is a crank and no man wants to work for him, and especially now that he has trouble at his dwelling. The people are all busy ploughing, threshing, pulling fruit, digging roots and each farmer has more work than he can do, without helping anyone else. Now, what are you going to do? You are in a tight corner and get out of it the best way you can, ye M.O.H.

Well good neighbors will not see a fellow cornered. Most people have friends somewhere, let some neighbor or friend do the turn at threshing and when the threshers come to this man's barn, have all board next door.

Infection in a School.—In a school section a skin trouble appears. After a week or ten days it appears to be infectious for the reason, pupils sitting in the same seat become infected. It does not appear to sicken any of the pupils very much. It is on the go for a month when the teacher gets it. She notifies the M.O.H. that she thinks there must be some infectious skin disease in the section. Now up to this time no physician has seen it. Whether the people became frightened lest it were an infection and for that reason did nothing or not, no one knows. On M.O.H. inspection the findings are a rash, glands of the neck are swollen, some redness of fauces, conjunctivitis, temperature 100, pulse about normal. M.O.H. called it scarlatina and of course quarantined those he found affected at the time. Upon further consideration later, he came to the conclusion that it must be an epidemic of Dutch measles. If it had been anything like scarlatina surely some

would have had a nephritis and have had some medical aid. Should he have quarantined all that section for something that had shown itself to be benign? Why, to quarantine that infection under the circumstances, would be to make quarantine a farce. One point the writer would like to emphasize in this and it is that of the heart action. One of the best signs of scarlatina is a rapid heart action, also vomiting is prominent. The color in that of Dutch measles is that of measles, but to be able to tell quickly a case of Dutch measles from that of scarlatina is well worth our greatest attention. For one to make a mistake in an instance such as this would be grave, if it were one of scarlet fever. Quarantine costs money and annoyance to those exercised thereby, especially in the country. The case narrated gives a fine chance for a man who wishes to be officious, but cases will arise where a fellow needs a lot of common sense. Get your people with you and do not try to be a paragon of law.

Chicken Pox.—Like the old rule of proportion in arithmetic, we might put it thus: As chicken pox is to smallpox, so are Dutch measles to scarlet fever. It will tax the best of us by times to tell some epidemics of chicken pox from that of smallpox in some of its modifications, but we are supposed to know. The public look to us as masters in all skin disease. In ringworms, impetigo, erythema and all the rest of them we are supposed to be infallible.

Anthrax.—Anthrax is a disease among cattle that attacks mankind. People often skin animals dying of it and thus run great danger. It is frequently found in some districts. The tanner takes chances in handling hides. The whole carcass of the diseased beast should be cremated, for fishworms bring infection to the top of the ground in case it is buried. The grass growing over the grave is thus infected. There is not much trouble from the milking cow, for she usually dies within a few hours of an attack. It is a very obscure disease in cases and hard to diagnose, one of the chief symptoms is that of gas blisters on the back of the beast. The veterinary surgeon does not always notify the M.O.H. of the disease in the district. The reason may be that stock so infected are not so saleable.

Rabies.—Rabies is difficult to handle. If you muzzle all the dogs in a community, you will meet with kickers. Years ago the writer was told of a man who had a pig bitten. This man sold the pig forthwith, pig means money now as then,

even if you include the squeal. It seemed too much for this man to lose. He evidently thought so. Half the dogs and cats should be shot on hearing of a case of rabies. It is not a very nice bit of exercise for the M.O.H. to go out to snare a mad dog. He is not supposed to shoot it. After its death he is the executioner.

Tuberculosis.—It is a wonder that there are not more cases of tuberculosis on account of the way farmers milk cows. A man may be at any kind of work and the next minute milking cows without his hands or the udders ever having been washed. The wintering of cattle causes so much uncleanness of the cattle that unless water is applied, the milk must be infected. Then when you think of our herds being infected up to 40 per cent., do you not wonder that more trouble extends? One should think that all milk should have a straining through cotton wool and pasteurization. This may be applied to cities and large towns, but when will the average farmer have anything like this done?

Flies.—Some farmers will keep a great heap of manure standing most of the summer in their barnyard. It appears strange to see an auto standing up beside a manure pile, it, of course, forms a contrast. His cattle may suffer from flies, yet he does not mind keeping a breeding ground for them. The steam wafted in the midnight breeze taints his milk and if his window be up on a hot night, the balmy air from it would be almost enough to give him lockjaw.

Drinking Cups.—The common drinking cup is a great danger. In our schools for a few cents, each pupil could have one of his own. It would be an educator for the young along the right lines for all teachers and trustees to advocate. Well, nature is kind, no doubt, and the physical strength of the country pupils can resist much. After the war there might be more mucous patches and sore throat to contend with.

Butchers.—Butchers are not clean in every particular. They often have a nice white apron, but some of them will stand watching. The old sow has often had many a good feed of tripe in the past. It might have been tuberculous, cancerous or otherwise, yet no boiling was applied. Meat inspection is difficult in the country. Farmers have beef rings in different parts. They usually select the best of animals to kill.

Cheese Factory.—Some cheese factories are not very particular about their surroundings. The odor of rotten whey is so common. It may not be very poisonous, but flies crawling over its surface and then over vats cannot be productive of health.

Provincial Bulletin.—Would not a Provincial Board of Health Bulletin, published annually, and placed in our schools, be a means of keeping the younger generation better posted in our health laws?

Editorials

THE BAPTIE REPORT

Again we are hearing a good deal about the Baptie Report. Bruce has recently scored some points, and the Government is now getting into a very ridiculous position.

The first Bruce Report was not approved by the majority of the C.A.M.C. or the medical profession of Canada. The references to the bad habits of certain officers were needlessly offensive in form. That however was really a side issue. The chief aim of the report was to bring about segregation of the Canadian soldiers in Great Britain, and also to bitterly condemn the work done by a lot of magnificent British and Canadian women in the V.A.D.'s. The sentiment of the great majority of the people in Great Britain was absolutely opposed to the Bruce recommendation.

If the Government had left things alone, the report, although causing some ill feeling, would soon have been forgotten, but, unfortunately, the Government appointed another committee, and an exceptionally good one, composed of Drs. Fotheringham, Toronto; Elder, Montreal; Ross, Kingston; and Ashton of Brantford.

However, to make it different from the other, Sir Wm. Baptie was added, with, unfortunately, quite a blow of trumpets. The Government never spoke of the committee as the Fotheringham-Elder Committee—it was always the Baptie Committee. But Baptie turned out to be a thoroughly incompetent man, and the Government suddenly lost track of his exist-

ence. The Government, when asked in the House of Commons if the Baptie of Mesopotamia was the chairman of their committee, could not tell. A little truth and frankness would certainly have done them no harm and would have prevented them from looking ridiculous.

THE RESPONSIBILITY OF MEDICAL MEN

The Toronto Globe happens to be a very sincere and intelligent friend of the medical profession of Canada. In an editorial which appeared in the latter part of July, the writer makes the statement that the Medical Man, just because of his authoritative, scientific knowledge, and because, too, of his recognized professional standing, has a duty to society wider and more commanding than the duty he owes to his patient, or to his patient's friends. He mentions a case where "quite plainly a crime was committed—a member of society died as a result of that crime—beyond all controversy, it was a duty . . . of the medical profession to relate that crime to the public officers of the law." "It is high time for the leaders in the medical profession to break down and to break through the outgrown cant that has for so long and so disastrously obscured the social obligations of medical men."

We agree with the *Globe* to a large extent, but we have to say that a large proportion of our profession are not disposed to agree with it in all respects. The whole question is surrounded with serious difficulties. The conscientious physician continues in the present day, as in the past, to entertain a very high respect

for the secrets of his patients, which he has received in a professional way, and this portion of the profession, which includes at least a large proportion of physicians, are not prepared to agree that the physician " has a duty to society far wider and far more commanding than the duty he owes to his patients and their friends."

CANADIAN MEDICAL SERVICES

We have during the last few months made many references to the Hospitals Commission established by the Government. The Commission apparently made a good start and much was expected from it. Unfortunately friction arose between this Commission and the Medical Military authorities. Because of this friction a Parliamentary Committee was appointed by the Government to investigate and report. The most important evidence received by this committee was that from Surgeon-General Fotheringham. In our last issue we gave the important points in the two reports from this committee, both of which were evidently fair and showed good will towards the medical military officers.

At the time of writing we have no knowledge as to what the Government will do anent these reports. The opinion is growing in certain quarters that it will do nothing until some time in the future when its action will be too late to render any good service. It would appear that Sir James Lougheed, Messrs. Armstrong and Scammell are carrying things with a high hand, and are practically defying the Militia Department with the C.A.M.C., and the whole profession of Canada, and yet no one of the three is

either a military officer or a medical man. Of course it has been rather a fashion for many years for those in power to *slam* the medical profession. How long will it continue? Just so long as the profession will allow it, and, so far as we can see at present, that will be for some time.

"CHILD WELFARE" WORK IN HAMILTON

In our last issue we referred with much pleasure to the magnificent work which has been done in the City of Hamilton with regard to the care of Infants.

Dr. Mullin, one of the chief workers in this good cause, in an address delivered before the Dufferin County Medical Society, August 5th, referred to the progress of the Child Welfare Movement in Hamilton, which started in 1910. The doctors of that city took steps to combat infant mortality. As a result of their efforts, the deaths among infants under the age of three had decreased from 577 per 1,000, to 191 per 1,000. To obtain a good supply of milk, the Cleveland System had been followed, and an abundance of fresh certified milk from approved cows had been secured, which was available to all who required it. The improved milk supply, and a system of education imparted to mothers by trained nurses, had produced splendid results.

ROYAL ARMY MEDICAL CORPS

For some time there has been a fear in Great Britain that the shortage in doctors of the Army Medical Corps would, before long, be very serious.

On the 9th of August, Earl Derby, Secretary of State for War, said he was informed on that day by the Central Medical War Commission, that no more men are available for Army Commissions without seriously jeopardizing the supply of doctors for the community. Since he made that statement, many members of the committee have expressed the hope that the solution of the difficulty will be found in a supply of doctors from the United States. Many members of the profession from nearly all parts of the United States have already gone. Some are on their way now, and far more in the near future will probably go, but it is feared by those who are best informed that notwithstanding the great value of these additions from the United States, there will still be a serious shortage in the months to come.

PROFITEERING

In a letter which appeared recently in the *Spectator* (London, Eng.), over the signature, "Reginald Broadbent," we find the following: In your remarks on Profiteering you say the rise in the price of labor is universal. May I make a correction? You should make an exception in the work of the medical profession in the treatment of "panel patients." Those requiring the least attention are now in the army, the remainder including a larger proportion of sick and failing persons are being attended at the same rate of insurance.

The writer then concludes the statement from the *B. M. J.*, as follows: "Our notification, they say, reduced from 2s. and 6d. to 1s. as a war economy,

saving thereby £23,000 a year. Shortly afterwards the organized local men received their second war bonus of £7,500,000." The Editor, in commenting on the latter says: "We agree, not only have they been unable, if desirous, which we doubt, to increase their fees, but have been expected to do a vast deal of unpaid work. This they have done with splendid devotion."

EDITORIAL NOTES

The Canadian Public Health Association

As previously announced the Sixth Annual Meeting of the Canadian Public Health Association will be held in Ottawa, September 27th and 28th next.

Canadian Association for Prevention of Tuberculosis

This Association will also meet in Ottawa during that week —September 26th.

Canadian Conference of Charity and Correction

Will meet in that city in the early part of the same week. Among the subjects to be discussed will be the question of Infant Welfare, Child Hygiene, etc., National Health Insurance and Venereal Diseases, in military and civilian public health aspects.

The Officers of the C.P.H.A. are: Patron, H.R.H. Duke of Connaught; Honorary President, Dr. Montizambert; President, Dr. Pagé, Quebec; Vice-President, Dr. Hattie, Halifax; Gen. Sec'y, Dr. J. G. Fitzgerald, Toronto, and Treasurer, Dr. Geo. D. Porter, Toronto.

News Items

The Executive Committee of the American Surgical Congress has decided, after consultation with the New York Committee on arrangements, to postpone until next year the meeting originally planned to be held in New York in October, and to hold this year's meeting in Chicago, October 22nd.

At four sessions Military Surgery will be discussed by such men as Alexis Carrel, Sir Berkeley Moynihan, Drs. Blake and Crile, Col. Goodwin, R.A.M.C. and others.

As at previous meetings clinical demonstrations in hospitals and laboratories will be given by clinicians of Chicago.

We learned from the *C.M.A. Journal* that several who had promised papers were at the last moment prevented from attending the Montreal Meeting because of being ordered to join their military units. Among these were Dr. Thomas McCrea, of Philadelphia, and Dr. J. J. McKenzie, of Toronto. It is stated that the paper read in the section of surgery by Dr. J. H. Cotton, of Toronto, on The New Ether was especially good. The attendance at the General Session was not all that could be desired. The next meeting will be held in Winnipeg, with Dr. McKenty, President.

We quite approve of the designation of Dr. Shepherd, of Montreal, as the doyen of Canadian surgeons.

Dr. Charles Hastings gave a most interesting address on public health. A large number of the laity of Montreal showed their interest by attending.

Obituary

ARCHIBALD McTAVISH, M.D.

Dr. McTavish, of St. Thomas, died at the Amasa Wood Hospital in that City, August 21st, aged 81. He had not been in practice for some years. After giving up his work in Staffa he went to live with his brother on the old McTavish Homestead, North Yarmouth.

DOUGLAS GRAY MacROBBIE, M.D.

Dr. Douglas MacRobbie, of Hamilton, died sometime between Sunday night and Monday morning August 19-20. His body was found at 1 a.m., August 20th, in a building belonging to the Crescent Oil Company. Death was evidently due to an injury. He was born at Victoria Harbour 43 years ago, and graduated in Arts in '96 and in Medicine in '99. He had been practising with success in Hamilton for nine years.

CAPT. A. P. CHALMERS, C.A.M.C.

Dr. Chalmers, formerly a practitioner at Oil Springs, died May 16th, at St. Lucia, B.W.I., from injuries sustained in an accident, aged 52. He moved to Toronto in 1913, and when the war broke out in 1914 he at once volunteered and was soon afterwards sent to St. Lucia.

BROOKS HUGHES WELLS, M.D.

Dr. Brooks Wells, of New York, perhaps best known in Canada as Editor of the *American Journal of Obstetrics,* died July 6th, from injuries sustained in a collision with an automobile while he was bicycling on his way to his summer home at Southport, Conn. He was a specialist in gynæcology and was connected with the Polyclinic and various other Hospitals.

THOMAS McQUADE, M.D.

Dr. T. McQuade formerly a practitioner in St. Columbus, Ont., died May 23rd, at Sault Ste. Marie, aged 40. He graduated from the Western University, Ontario, in 1906.

JOSEPH ORLANDO ORR, M.D.

Dr. Joseph Orr, of Toronto, had not enjoyed good health for three or four years, although able to go about most of the time, and attend to his duties in connection with the Canadian National Exhibition. His friends, and especially the Directors of the Exhibition, decided early in the summer that it would be better for him to have a complete rest, and therefore gave him leave of absence until the end of the year. He appeared to be doing fairly well for a time, but about the middle of August his heart became seriously affected, and on August 20th he became comatose, and gradually failed until death came August 22nd. As his comparatively sudden collapse was unknown by the great majority of his friends, the news of his death came as a great shock.

He was born in the County of York 56 years ago last April. He received his medical education in the Toronto School of Medicine, and graduated M.B. from the University of Toronto in 1884. He then went to England and, after doing post-graduate work for some time at King's College Hospital, he did considerable practice as locum tenens in different parts of England. On his return he practised for a short time near the place of his birth, and then removed to Toronto, where he achieved success, first as a general practitioner, and then as a specialist in Diseases of the Eye, Ear, Nose and Throat.

He took much interest in educational matters, and was the founder of the Toronto Technical School, and for some time the chairman of its Board. He took an active interest in both Dominion and Provincial politics, and had great influence in the councils of the Conservative party.

He possessed great ability in many directions, and was tremendously energetic and industrious. It was generally recognized that he had great executive ability, which was clearly in evidence in connection with his conduct of the Canadian

National Exhibition for the last 14 years. But beyond that, it may be truly said, as the *Toronto Mail and Empire* expresses it: "He was a man of big ideas and clear vision." In a general way he was one of Canada's most popular men, and he fully deserved his popularity. He possessed those magnificent qualities of the heart which endeared him to his vast host of friends. His death has caused in his army of friends a sadness and sorrow which are inexpressible.

His son, Major George Orr, has seen much service at the front during the last two years. He was given leave August 14th to return to Canada with the hope that he would reach Toronto in time to visit his father during life, but, unfortunately, he was still on the Atlantic when his father died.

Book Reviews

The Treatment of Diabetes Mellitus, with observations upon the disease based upon thirteen hundred cases. By Elliott P. Joslin, M.D. (Harv.), M.A. (Yale), Assistant Professor of Medicine, Harvard Medical School; Consulting Physican, Boston City Hospital; Collaborator to the Nutrition Laboratory of the Carnegie Institute of Washington, in Boston. Second edition, enlarged and thoroughly revised; illustrated. Lea & Febiger, Philadelphia and New York, 1917.

The early exhaustion of Professor Joslin's work on Diabetes has necessitated the appearance of a second edition. This has given the author an opportunity to carry his experience a year further, confirming certain statements as to treatment, made previously more or less tentatively. Such are the accumulated evidences as to the benefit of the Allen treatment by fasting.

It is needless to say that the subject is not only handled in a masterly way, but the text is written in a clear and lucid style which makes its reading a pleasure. The book is so essentially a perennial one that the statements it contains carry a double weight. Tables, statistics and plates are freely used in exemplification of the text. We are sure that the second edition will meet with the same hearty reception which was accorded the first.

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles. Edited by H. R. M. Landis, M.D., Philadelphia. Volume II, twenty-seventh series, 1917. Philadelphia nad London: J. B. Lippincott Company.

The change in this ever-welcome quarterly is all for the good. The ten clinics that have been introduced for the first times are excellent, most of them masterpieces. But the other articles on Treatment, Medicine, Dermatology, Gynæcology, Ophthalmology, Surgery and History are equal to the previous high level of the classics, which will certainly be more popular than ever.

Selected Article

CONGENITAL HAEMOLYTIC JAUNDICE IN THE ADULT

By Professor A. Chauffard,
Of the Faculty of Medicine of Paris.

The first appearance in scientific circles of hæmolytic jaundice in the adult was in the form of the family hereditary variety. This definition is based on the first case published by Minkowsky in 1900. It was that of a family in which eight cases of jaundice were observed in three succeeding generations. The disease, says Minkowsky, is characterized by chronic jaundice with urobilinuria, splenomegaly, and renal siderosis.

My own case was that of a medical student who had suffered from well-marked jaundice from birth, and he was a golden yellow. At first I wondered whether he had a congenital malformation of the biliary apparatus calling for surgical intervention, but laboratory research showed remarkable fragility of the blood corpuscle which is the starting point of the hæmolytic theory of certain cases of jaundice. Since that date many such cases have been recorded.

One of the most recent was that of a lad, twenty years of age, who sought admission on account of his yellow color and occasional attacks of pain in the left hypochondrium. He says he has had this pain off and on ever since the age of five. He has also suffered from intestinal disturbances with alternations of constipation and diarrhœa, leading his medical advisers to suspect tuberculous peritonitis on the occasion of an acute attack. He was able, however, to go back to work with merely slight pain in the hypochondrium and left shoulder. He asserts that the motions were never clay colored, but always of a dark greenish-bronze.

In 1910, consequent upon a journey by rail, he was seized with severe pain in the hypochondrium. He presented a moderate cutaneo-mucous jaundice of a greyish anæmic tint on the skin, golden yellow in the conjunctivæ. The urine was clear and did not give Gmelin's reaction, though it contained a notable proportion of urobilin. The liver was about normal, vertical dulness 12 cm. Examination of the blood showed unquestionable cholæmia.

It is seen, therefore, that there is a chronic congenital infan-

tile form of jaundice. In most instances the jaundice is the initial symptom and the patients are yellow from the start. In this case the father tells us that the child was as yellow as a guinea when he came into the world. In other cases the jaundice is secondary to an initial phase of icteric anæmia. The patients are at first pale, then become yellow. Urobilin is invariably found in the blood, because urobilinæmia accompanies urobilinuria.

Another important feature of this disease is the non-decoloration of the fæces. This is a detail which must always be enquired into when there is any reason to suspect hæmolytic jaundice. In these cases the stools are not clayey and pasty, as in retention jaundice. On the contrary, they are over-colored, greenish, even spinach green. Then, too, we cannot but be struck by the fact that these patients maintain a very decent standard of health in spite of the jaundice, which, for that matter, is not invariably present.

Such patients turn yellow or cease to be yellow according to circumstances. Diet does not count for much, but they are neuropathic subjects in whom emotions are apt to increase the jaundice for a time.

Congenital jaundice is also characterized by the three following negative signs, viz., absence of the itching, which is such a distressing symptom in other icteric patients, absence of bradycardia and xanthelasma.

The production of palpebral xanthelasma is constant in cases of chronic protracted jaundice. Its absence in congenital icterics is to be explained by the biological constitution of this little tumor, as shown by Laroche and myself. In a monograph on the subject we established the fact that xanthelasma is a local affection due to the deposit of cholesterin in the dermis. Its formation is therefore in relationship with the increase of cholesterin in the blood, and it is only met with in patients with jaundice associated with hypercholesteræmia.

On the other hand, this congenital jaundice, from the very fact that it is not due to retention, is not accompanied by decoloration of the stools. On the contrary, the pigment is in excess constituting what Stedelmann called pleiochromic jaundice.

The spleen as a rule measures from fifteen to twenty centimetres. It is best seen by the aid of radioscopy.

These patients are often rather delicate and have a pallid hue, though in reality more icteric than anæmic. This is in contrast with the victims of acquired hæmolytic jaundice who are often more anæmic than icteric.

A series of complications may determine grades passing from mild cases to comparatively serious cases.

Clinical examination already affords us fairly strong presumptions as to the existence of congenital hæmolytic jaundice, but we must never remain satisfied with merely clinical evidence, and certainly can only be provided by laboratory investigation.

Under normal circumstances the blood is maintained in a state of isotonic equilibrium by means of erythropoiesis. Now it sometimes happens that the red corpuscles present what is known as globular fragility. In such case erythropoiesis is exaggerated and the bile pigments derived from the hæmoglobin pass into the circulation. This leads to non-compensated forms of hæmolytic jaundice, to the pernicious icterogenous anæmia described by Laroche and myself. The compensated form corresponds to congenital hæmolytic jaundice.

We ascertain the existence of globular fragility by the method introduced by Vaquez and Rivière. Doctor Rendu always found a very pronounced diminution of globular resistance in these cases of congenital jaundice. Or we may have recourse to Widal's method of deplasmatized blood, which is more sensitive than the preceding and may be found useful in certain cases.

Hæmolytic jaundice then is characterized by a diminution of globular resistance. In the second place it is associated with a reduction of the average diameter of the red corpuscles and anysocytosis, i.e., inequality and deformation of the corpuscles. In this patient the average diameter is from three to five microns. In jaundice, by retention, on the contrary, we get increased resistance and diameter, so that there is absolute opposition between the two types.

Hæmolytic jaundice is also peculiar by reason of the biological feature of the presence of a large number of granular red corpuscles, which are shown to be present by means of Pappenheim's reactive.

These granular red corpuscles must not be looked upon as changed red corpuscles, but in reality as elements of abnormal, atypical, pathological regeneration. I have convinced myself that this is the correct explanation by injecting eel serum into animals, which, as you know, has for effect to rapidly destroy the red corpuscles. Now it was not at the time that this destruction takes place that we find granular corpuscles in the blood of the subjects, but only when regeneration is beginning to take place.

The absence of auto-agglutination and of auto-hæmolysis completes the hæmotological characters of congenital hæmolytic icterus.—*Medical Press and Circular.*

Selections

Radiation in Malignant Disease

As old diseases are abolished or brought under control, new ones arise or new aspects of disease which were previously overlooked. But cancer remains with us in spite of half a century of special hospitals and many years of intensive research, and the new Ministry of Public Health, when instituted, will find no task of greater difficulty or importance than to deal with malignant disease in all its forms. Recent work with radium and the X-rays in cases of malignant growth has begun to raise some hopes of a possible solution in this direction. That we have in these sources of radiation a powerful ally in the war against malignant disease is now very generally admitted, but it cannot be said that it is being employed as yet to an extent justified by our present knowledge.

The site of the growth naturally has a material influence on the treatment. It is more or less an axiom among radiologists that the more superficial the lesion the more likely is it to be benefited by any form of radiation, and the high percentage of successful results in the treatment of rodent ulcer illustrates this clearly. Difficulties increase in direct proportion to the depth to which the disease has invaded the deeper structures, and modifications in technique are required on this account. A study of the cases given in the reports from Edinburgh and Manchester especially shows that some measure of success has attended the efforts to overcome these difficulties. The burying within the growth of tubes containing either radium or its emanation has produced excellent results, and this method holds out possibilities of permanence, since the base of the growth, from which metastasis arises, is attacked concurrently with its more superficial parts. A further and a logical application of the principle here involved would indicate the removal of the more superficial parts of a malignant growth in order that the base may be more efficiently attacked. The remarkable control of the X-rays and radium over fungation removes the surgeon's most serious objection to operating under these circumstances, and is a further argument for a still closer co-operation between the surgeon and the radiologist than exists at present. . . . The difficulty of obtaining radium in any quantity makes it rare, but its scarcity is compensated for largely by

the constancy of its output—a condition that has greatly facilitated the development of radium therapy. In contrast with the irregularity of the output from the X-ray tube, radium itself gives us a profuse supply of radiation easily and cheaply obtained. This drawback to the use of X-ray is, however, materially reduced in the latest form of tube construction. Indeed, as a result of the introduction of the Coolidge tube it is not impossible that X-ray therapeutics will undergo very considerable modifications. Whichever method, however, is being practised, certain points have already emerged with more or less certainty, and the most important of these is the danger of delay. Every day's delay diminishes the patient's chances of complete recovery, and this principle applies particularly to operable cases. However favorable a case may appear, no surgeon can be sure that he has removed every trace of malignancy, or, indeed, that he himself has not scattered malignant cells over the field of operation. Nothing should be left to chance, and as prophylactic radiation involves no necessity for disturbing the dressings or the patient, it should be commenced the day after operation. Another important matter of general agreement is that within reasonable limits long applications are preferable to short ones. Perseverance, too, is a scarcely less powerful factor for success. Many patients needlessly throw away months or years of useful and comfortable existence through failure to follow the advice that is given them. In the light of the experience hitherto gained, it is not too much to say that a good case has been made out for the use of some form of radiation in the great majority of malignant cases, and that its more general employment will have a favorable influence on their prognosis.—*The Lancet,* April 7th.

The Value of Genito-Urinary Antiseptics

We have often called attention in these pages to the fact that unless a drug has a particular affinity for some form of parasitic protoplasm it cannot destroy this protoplasm without doing damage to the more highly organized tissues of the human being. It is this fact which stands in the way of the administration of so-called antiseptics in the treatment of many infectious diseases, and in the infections of the genito-urinary tract it has been urgently desired that something might be found which, when taken by the mouth, would be eliminated by the

kidneys and possess active antiseptic power. While the results along this line have been better than in the case of infections in other parts of the body, they have, nevertheless, been disappointing because this failure does not alone lie in the reasons just given, but also depends to some extent upon the pathway of infection. When it is through the blood there is a continual reinfection taking place in the genito-urinary tract, and this is possibly also true when the infection is from below. One of the reasons which have been advanced, however, to throw doubt upon infection from below upwards has been that it seemed unlikely that microörganisms would find their way up the ureter against the stream of urine into the pelvis of the kidney.

In this connection an interesting contribution to the *Journal of Medical Research* has been made by Eisendrath and Schultz, who have demonstrated the presence of an anastomosing network of lymphatics in the wall of the bladder and of the ureter, communicating above with a similar lymphatic network in the renal pelvis and parenchyma. At its lower end this system communicates also with the lymphatics of the pelvic structures, in both the male and female. Other conclusions reached by these authors are as follows:

Infections of the bladder or lower ureter may reach the renal pelvis or the kidney, either by way of the lumen of the urinary tract or by way of the mural lymphatics.

Experimental and clinical evidence indicates that almost complete obstruction to the free passage of the urine is necessary for the ascent of infection by way of the lumen of the urinary tract.

Experimentally they have shown that infection, set up by the simple introduction of bacteria into the bladder without injury or without obstruction, may pass upward by means of the interstitial lymphatics of the ureter.

The degree of involvement following the introduction of bacteria into the bladder depends upon the virulence of the organism and upon the susceptibility of the animal. The subsequent tissue reaction may remain limited to the bladder and ureter, it may pass upward to the tissues of the renal pelvis, or even the parenchyma of the kidney itself may become involved.

When the kidney tissue is involved in ascending infection brought about experimentally, as described, the path of travel is from the subepithelial tissues of the pelvis to the kidney by way of the intertubular and perivascular lymphatics.

From the kidney the perirenal tissues may become involved through the capsular lymphatics, which anastomose with those of the cortex.

The experimental evidence indicates that, in cases of pyelitis and pyelonephritis in the human, secondary to infection of the bladder, the lymphatics constitute the most important course of upward travel of the infection, especially in those cases in which there is no hindrance to the urinary outflow.

Pyelitis and pyelonephritis, not secondary to cystitis, may also be the result of lymphatic transport of infection from the pelvic organs in the male and female, and from the lower intestinal tract.

The extension of infection by these lymphatics is another adequate explanation for the failure to do good of antiseptics administered by the mouth for elimination by the kidney.—*Therapeutic Gazette.*

Tobacco and Blood-Pressure

It is a curious thing that a subject which is of so much general interest has received so little attention within recent years as the relationship between the use of tobacco and blood-pressure. Ever since tobacco was first used there have been attacks upon its employment, and some enthusiasts have even been inclined to the belief that it actually produced criminal tendencies, or conditions almost equally evil. Last year we called attention to an admirable article by Harlow Brooks on "Tobacco Heart," and we now call attention to an article by W. Gilman Thompson and William H. Sheldon, in the *New York State Journal of Medicine*, who have studied the effect of smoking in one hundred and nine experiments without reaching any very definite result. Most, if not all, of the experiments, however, were made upon men who already had developed arterial degenerative changes.

Physicians so often ask themselves the question as to whether the use of tobacco is harmful and are so frequently consulted by patients along these lines that our readers will be interested in the conclusions which Dr. Thompson and Dr. Sheldon have reached. These are as follows:

1. The maximum effect of cigar smoking was included in different cases within the limits of a rise of systolic pressure of 35 mm. and of pulse pressure of 22 mm. on the one hand and

a fall of 30 mm. in systolic pressure and 34 mm. of pulse pressure on the other, the effects diminishing usually after about an hour.

2. In fifty-eight patients there was a rise of systolic pressure in 35 per cent. and a fall in 45 per cent., the remaining 20 per cent. being unaffected.

3. The results were not always uniform in the same patient when recorded at long intervals, the same patient sometimes exhibiting a rise and less often a fall in systolic pressure.

4. The results were not uniformly proportional to the degree of initial blood-pressure in the individual patient. That is, patients with an initial systolic pressure of 160 to 170 mm. showed as much variation after smoking as those with an initial pressure of 250 mm. or more.

5. In seventeen patients more than one observation was made, with a total of eighty-two experiments, to include the pulse pressure. In these cases the average rise equalled the average fall, being 11 mm.

6. The pulse pressure did not invariably rise with the systolic pressure, but occasionally fell or remained unaltered.

7. The effects of cigarette smoking corresponded in general to those of cigar smoking and were fully as variable.

8. Owing to the great variation in the effects of smoking produced in different patients, it is desirable that each case be separately studied before giving rules for controlling the habit. But it may be stated definitely that whereas the risk from an elevation in blood-pressure increases greatly the higher the initial pressure in the patient, it is undesirable for any one having a constant systolic pressure much above 200 to smoke; and secondly, smoking is equally undesirable for any one having a constant initial pressure above 160 mm. when the use of tobacco is found uniformly to produce a considerable rise in blood-pressure.

Summing up these conclusions, it would appear that when a man has a constantly high blood-pressure the use of tobacco is inadvisable, but otherwise we fail to see that any serious objection has been brought forward to its moderate use by healthy individuals, and when we use the term "moderate" we must consider the strength of the tobacco, the constancy of its employment, and susceptibility of the individual in each instance.—*Therapeutic Gazette.*

Dermatology of the War

The diseases of the campaigning soldier differ considerably in nature and frequency from those encountered in times of peace. In the dermatological clinics of the Paris hospitals before the war, one would encounter as the most frequent forms of dermatosis, eczema, scabies, psoriasis, and tuberculous troubles under lupic or varicose forms. To-day eczema, tuberculides, and scabies are rare, being replaced, in order of frequency, by phthiriasis, eczema, and trichophytinous diseases, oftentimes marked by varied peculiarities.

During the winter months there frequently appear several varieties of artificial forms of dermatitis; there are unusual forms of impetigo of the face, sycosis of non-parasitic origin, and particularly the subnasal form is frequent.

Tuberculides and tuberculosis of the skin are rare. This is not astonishing when one is acquainted with the rigorous care with which tuberculous subjects were eliminated by the medical examiners as the soldiers presented themselves for active service. The army life and exercise in the open air; the nourishment, good in quality and quantity, have constituted great obstacles to the development of the attenuated forms of tuberculosis of the skin.

Phthiriasis has been the disease in common evidence and chiefly in the acute form, which is rarely seen in ordinary times. In many cases the invasion of the parasites is so sudden and so abundant that nearly the whole of the body will be covered by small œdematous papules of the size of a pinhead, resembling urticaria. The papules of excoriated prurigo, with their small black-brown crusts, habitually seen in phthiriasis are the exception; equally rare is the melanodermy common to chronic phthiriasis.

The sudden invasion and early care of these cases confined them to the acute manifestations, but with the more prolonged and exacting duties of this summer's campaign the papules of excoriated prurigo and melanodermy are beginning to appear. One of the marked peculiarities attending this disease among the soldiers is that they almost constantly present an ecthyma of the inferior members; these resemble artificial wounds, and when seen for the first time have been mistaken for voluntary mutilation, but were found to be the result of scratching by infected nails. The soldier standing upright reaches down and scratches himself.

Several articles have been published in the French medical press calling attention to the recrudescence of psoriasis observed among the soldiers resulting from nervous shock, violent emotion, or traumatism. Following the destruction of the "Jena," one of the soldiers had hospital treatment for a brusque attack of psoriasis resulting from violent emotion produced by the explosion.

A young soldier of twenty-two suffered an attack which appeared generally distributed over the whole body immediately following his first charge upon the trenches of the enemy. Another soldier, twenty-eight years old, had an eruption of this disease generally distributed over the trunk and arms following the explosion of a "marmite," which knocked him down but produced no wound. A young woman of twenty-five presented this eruption immediately following the bombardment of Arras, where she was living. A number of cases of this disease have been reported following wounds.

At the beginning of the war there were gathered five or six thousand head of cattle at Verdun to furnish meat to that entrenched camp. The soldiers in charge of the cattle were attacked with trichophytis, which appeared generally all over the body. It spread to the artillery and all the branches of the service where the men came into contact with animals.

There has been a remarkable absence of itch among the soldiers. It would appear that men do not catch this disease from each other under the ordinary conditions of campaigning; that is, clothed and sleeping side by side in straw or on the ground.—Paris Correspondent *Medical Record.*

Why Men Leave Home

"My husband has no faults; he doesn't gamble and he doesn't drink."

"Doesn't he smoke, either?"

"Well, after a good dinner, he may light a cigar, but that's only about once in six weeks."—*Pall Mall Gazette.*

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Miscellaneous

In Children and in Old People

Kidneys are often affected by exposure to cold or chill. These disturbances may range from sudden and frequent desire to urinate to the severe forms of urinary irritation. The first is usually accompanied with free and excessive flow of water, where in the latter case there will be but a small quantity of water, frequently passed with difficulty and pain. If the cause is not removed, this dysuria with frequency may continue day and night until cystitis occurs, or until a spastic renal condition is found to be present, with active congestion followed quickly by acute inflammation. The remedy is heat persistently applied externally to produce relaxation and sanmetto in drachm doses for adults every hour until relief, then less often as indicated, and half doses for child in like manner. Particularly is it true with men suffering from prostatic trouble that they are often affected by exposure to cold or chill, causing congestion at the bladder neck, with frequent desire to urinate, and urine passed with difficulty and pain. Hot applications externally, either moist or dry, and sanmetto in teaspoonful doses every hour until relief, is the remedy.

Treatment of Hay Fever

Notwithstanding the many "specifics" and near-specifics" for hay fever that have been pushed forward in recent years, the disease, if not precisely enigmatical, continues to baffle and perplex. It is evident that no single therapeutic agent has arisen that can eliminate, or even modify, the symptoms in all cases. Individual sufferers present problems that are peculiar to themselves, and other than the vasomotor relaxation of the upper respiratory tract, which is common to all, there are no uniform underlying pathologic changes.

Fortunately there are some very satisfactory alleviants. The suprarenal substance, in the form of its isolated active principle, Adrenalin, is undoubtedly one of the best of these. Experienced practitioners say that in a large majority of cases it successfully controls the symptoms. Adrenalin Chloride Solution and Adrenalin Inhalant are the preparations com-

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monly used, being sprayed into the nares and pharynx. The former should first be diluted with four to five times its volume of physiologic salt solution. The latter may be administered full strength or diluted with three to four times its volume of olive oil.

Another agent of large promise in the treatment of autumnal hay fever is Ragweed Pollen Extract. Its use is based upon the generally accepted theory that this type of hay fever, with occasional exceptions, is due to the pollen of ragweed. An accurately standardized product is supplied by Parke, Davis & Co. It is administered hypodermically.

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2. Thou shalt not send any engraving, nor any likeness of any airship in heaven above, nor any postcard of the earth beneath, nor of any submarine in the sea, for I, the Censor, am a jealous Censor, visiting iniquities of the offenders with three months' C.B., but owing mercy unto thousands by letting their letters go first of those who obey my commandments.

3. Thou shalt not use profane language unless under extraordinary circumstances, such as seeing thy mate shot or getting petrol in thy tea.

4. Remember the soldier's week consists of seven days. Six days shalt thou labor, and on the seventh thou shalt do all odd jobs.

5. Honor thy King and country; keep thy rifle well oiled, and shoot straight, that thy days may be long in the land the enemy giveth thee.

6. Thou shalt not steal thy comrade's kit.

7. Thou shalt not kill time.

8. Thou shalt not adulterate thy mess tin by using it as a shaving mug.

9. Thou shalt not bear false witness against thy comrade, but preserve silence on his out-goings and in-comings.

10. Thou shalt not covet thy Corporal's post, nor thy Sergeant's, nor thy Sergeant-Major's, but by thy duty and perseverance thou shalt rise to the position of Field Marshal—*Balkan News* (circulated among the forces at Salonica.)—*The Kinsman.*

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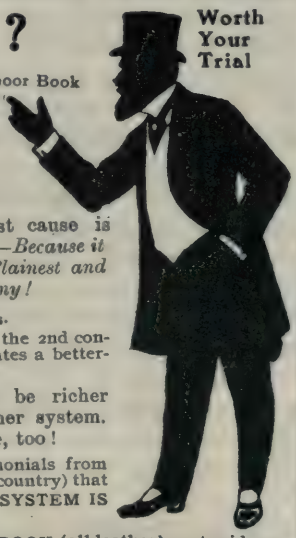

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Ether Irrigation for Wounds

A. Distaso and T. R. Bowen show that ether, when applied to wounds, acts as a stimulant, increasing cell metabolism and hastening the formation of catabolic products. In this way a sleep similar to that from fatigue is produced. At first the author tried dressing the wounds with gauze soaked in ether and covered with cotton wool, but the results were unsatisfactory, owing partly to the cooling action of the substance and the skin irritation. Next they used a two per cent. solution with an irrigator, two litres being used once daily. This had no bactericidal action, but helped to get rid of the necrotic tissue. Recently they have treated some cases by immersion of the wounded surfaces in the solution. The ether stimulates the increased growth of firm granulations and therefore forces healing. The newly formed granulations are provided with a free and constant lavage with blood. Many wounds treated unsuccessfully with antiseptics did well with the ether irrigation.—P. A. H. (*British Med. Jour.*, 1917)—*The Prescriber.*

Gall Stones

In the May number of the *Journal of Pharmacology and Experimental Therapeutics,* David I. Macht writes upon the comparative effects of the opium alkaloids, individually and in combination with each other, on the gall-bladder. It is well known that for the relief of biliary colic, full or large doses of morphine must be given, and are often to be repeated. The beneficial effect of morphine in such cases is due entirely to its central nervous action, the local effect of morphine through its stimulating action on smooth muscle tending to aggravate the spasm. The rational procedure in such cases seems to be the employment of papaverine or of one of the opium combinations such as pantopon, which act both as central analgesics and at the same time tend to quiet or relax the local spasm of the gall-bladder. Macht has himself treated successfully three cases of gall stone colic with papaverine injections, in one case on repeated occasions. Again, it has been the experience of a number of clinicians with whom he has communicated, that opium seems to be more effective in gall stone colic than morphine. His conclusions are:

(1) Morphine, codein and thebain have either no appreciable effect upon the tonus and contractions of the gall-bladder or tend to stimulate them.

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(2) Papaverine, narcotin and narcein tend to inhibit the contractions of the gall-bladder and to decrease its tonus.

(3) In a combination of total opium alkaloids, the benzylisoquinoline effect on the smooth muscle predominates.

(4) Atropin, in small or therapeutic doses, does not relax the tonus of the gall-bladder.

(5) The above observations having been made, on the one hand on the isolated gall-bladder, and on the other hand corroborated on the gall-bladder in situ, seem to point to the superiority of papaverin or a combination of total opium alkaloids over morphine in the treatment of biliary spasm or colic.—*Cleveland Medical Journal.*

The Non-Specificity of the Tuberculin Reaction

Much, very much, has been written about the tuberculin tests—the cutaneous or von Pirquet test, the intradermic or Manteaux test, the conjunctival or Calmette test (now not used), the inunction or Moro test, and the subcutaneous injection test. Their diagnostic value has been much discussed and many lengthy papers have been written anent the significance they have with respect to the activity or non-activity of the tuberculous lesion. It is now generally admitted by phthisiologists that none of these tests, per se, proves the activity of the tuberculous process present in any particular individual. In truth we may say the same thing of the more recently developed complement-fixation test for tuberculosis, no matter what antigen be employed in the carrying out of this test.

Aside from its diagnostic import, however, it is surely well for us to know whether the reaction obtained in the tuberculin tests of one sort or another is of a specific or non-specific nature. We are told by Fishberg that from the scientific standpoint the specificity of the tuberculin tests has not at all been proven to the satisfaction of those interested in this very important problem. In fact, autopsy findings have actually shown the absence of tuberculous lesions in patients in whom this test was positive, and vice versa. Furthermore, it may be added that experimental methods when applied lead us to the same conclusion. For instance, it has been discovered that tuberculous animals may react to and even be killed by the injection of any foreign bacterial protein of non-tuberculous origin just as readily as with tuberculin itself. Over and above this, there has been found in human beings hypersensitiveness to extracts from non-tuber-

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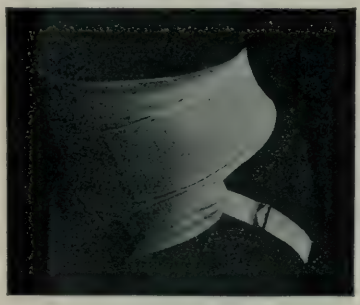

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culous bacilli, this hypersensitiveness greatly resembling in all ways the hypersensitiveness due to tuberculin alone. In brief, the cutaneous tuberculin reaction is also produced by non-tuberculous toxins applied as in the von Pirquet, intradermic, and subcutaneous tests.

The evidence in this connection is not confusing, but clear-cut. The so-called general reaction (consisting of fever, headache, anorexia, malaise, and other constitutional symptoms) as well as the local or even the focal reactions have all been produced by non-tuberculous substances. Per contra, this same reaction has been produced by tuberculin in individuals with such conditions as leprosy and syphilis, for example.

Still further, as Fishberg gives evidence, some persons reacting to tuberculin have been found to react in similar fashion even to saline solutions. Among the other than tuberculous foreign proteins which have been found to give a reaction simulating the tuberculin reaction, we may mention the toxins of dysentery, typhoid, paratyphoid, pyocyaneus, cholera, etc., although the individuals tested had, with the exception of tuberculosis, never been attacked by typhoid, paratyphoid, pyocyaneus sepsis, cholera, etc., thus ruling out specific anaphylactic reactions in any of the cases. Even with peptoalbumose, skin reactions indistinguishable from those of the von Pirquet test have been obtained in some individuals in whom there was also a positive tuberculin test.

This, it is plain, seems to prove that the tuberculin reaction is due mainly to hypersensitiveness of the skin and not to specific allergy to tuberculin alone, the allergy being rather a cutaneous hypersensitiveness to proteins in general. Even the subcutaneous test reaction has been obtained by the use of nucleins, blood serum, testicular extract from healthy animals, culture-free bouillon, and other foreign albumoses injected into tuberculous persons. Fishberg is apparently justified, then, in declaring: "It appears that the tuberculin reaction is part and parcel of the hypersensitiveness of the infected organism to foreign proteins of any kind, tuberculous or non-tuberculous."

These conclusions with reference to the non-specificity of the tuberculin reaction are especially interesting in view of the recent reports tending to prove the, at least frequent, non-specificity of vaccines in general, as shown, for illustration, by the employment of all sorts of foreign proteins in the treatment of arthritides, typhoid fever, and the like. These contentions, too, are in harmony with Vaughan's fascinating theories of protein intoxication.—*Medical Record.*

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The Sanitary Attack upon Syphilis

William Allen Pusey, *Am. J. Syphilis,* 1917. The sanitary attacks upon syphilis include two sorts of measures, (*a*) measures looking to the control of the infected; (*b*) measures providing safeguards against infection.

The author does not believe in public health regulation of notification and of prostitution. He would rather institute a therapeutic attack on the disease, insisting on the state and municipality establishing proper facilities for taking care of these cases. There should be proper skilled medical service, salaried medical men, adequate equipment for diagnosis and treatment. The clinics should be well organized with a follow-up system for patients. Provision should be made for a night clinic where those able to pay a small fee could be treated.

Moreover, we must have better facilities in our medical schools for the teaching of syphilis—more time must be given to it. Public education will do much to prevent infection in others.—*Cleveland Medical Journal.*

The Cause of Carcinoma

Rockey (*Surg. Gynec. and Obst.*), proposes the hypothesis that cancer is caused by a defensive process of the tissue-cells to a great variety of irritations; and that there is no specific external cause for cancer. There is a normal antagonism between cells that are mesoblastic, and those of epiblastic, origin; which prevents them from intermingling under the ordinary circumstances of wound healing.

The defensive reaction to any irritation that falls short of the destruction of cells is an active karyokinesis. The more active this becomes the more nearly the cells approach the embryonal type and become irregular in their mitosis. This irregularity is the result of the struggle for existence, in which they fail to produce perfect cells. This is true both of the epithelial and the connective-tissue cells. Like allies in common defence, these young and actively growing cells lose their normal antagonism for each other and more readily mingle. The young epithelial cells become engulfed in those of the connective tissue; and lose their proper position on the surface. The environment which makes for normal development of the cells is lacking. They belong on the surface; and cannot in the depths of the tissues attain anatomic perfection, and physiologic activity.

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They retain the excessive karyokinetic tendency of their immediate progenitors; and can only grow and reproduce. This tendency, which was at first a defence growth against the irritation which destroyed the basement membrane, thus produces cancer.

There can be no single external specific cause, either microbic or protozan, for cancer, which has its origin in such a variety of irritations as those found in smokers' cancer of the mouth and lip, betel-nut chewers' cancer of the mouth, chimney-sweeps' cancer, and cancer produced by X-ray irritations, slow burns, as those of the abdominal wall in the natives of Thibet; cancer of the stomach following ulcer, or those of the colon and rectum at the dependent portions, where fæcal accumulations produce chronic irritations. All such irritations may, when they are of sufficient intensity to destroy the basement membrane, provoke a defensive reaction in the cells, which reduces them to an embryonal form, and karyokinetic activity diminishes their normal antagonism to each other, and thus causes cancer.—*American Medicine.*

A New Interpretation of the Pathologic Histology of Hodgkin's Disease

Douglas Symmers, *Arch. Int. Med.*, 1917: XIX: 990. The author thinks that Hodgkin's disease is primarily neither an infective nor a neoplasmic lesion of the lymph nodes, but a systemic disease which expresses a predilection for lymphoid tissues, gives rise to multiple foci of growth at approximately the same time and in response to the same provocative agent, whatever its nature and origin may be, causes preliminary hyperplastic changes in the lymphoid tissues and initiates disturbances in the bone marrow, characterized, among other things, by proliferating of the nongranular mononuclear cells of the lymphocytic type, eosinophils and eosinophilic myelocyte. These cells together with the myeloplaxes, are thrown into the circulation and filtered out by the lymph nodes or deposited in them in response to chemotactic attractions, the fibrotic changes of the recipient tissue representing a purely local reactive process. The histological changes beyond the lymphoid system proper, namely, in the liver, kidneys, etc., represent a reaction on the part of normally existing lymphomatous foci to the same toxic substance which is responsible for the disturbances in the bone marrow and for the myeloid transformation of the lymph nodes.—*Cleveland Med. Journal.*

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The Canadian Practitioner and Review

Vol. XLII. TORONTO, OCTOBER, 1917 No. 10

Original Communications

SURGICAL TREATMENT OF LARYNGEAL CANCER *

DR. J. E. MACKENTY, NEW YORK.

In presenting this subject, only two procedures will be considered, viz., total laryngectomy and hemi-laryngectomy. The attempt to remove malignant growths by intra-laryngeal methods, advanced as these now are, is to be condemned. The eradication of cancer by thyrotomy is an ideal method, conserving the normal breath way and a varying degree of audible speech. But it is applicable only in the most incipient cases. It is conceivable that improved diagnostic skill on the part of the profession at large may bring these cases to operation at a stage sufficiently early to justify a more frequent use of thyrotomy. My experience with it has been discouraging, giving a large return of hopeless recurrences.

Recurrence after thyrotomy means increased malignancy and irreparable loss of time. I firmly believe that the surgeon is given but one chance to eradicate cancer, wherever situated.

In border line cases the patient's feelings may determine between total and partial removal, some preferring even death to a voiceless existence. When in doubt and the choice of operation is left to the surgeon, the larynx should be split and its interior inspected, then partially or totally removed as seems advisable.

The degree of malignancy, as determined by the history and appearance of the growth, must be taken into account. When any doubt exists as to the best procedure I would

* Read at Ontario Medical Association, Toronto, June, 1917.

strongly advocate the more radical one. If the growth approaches close to the median line in the anterior or posterior commissure, total laryngectomy is indicated. If the arytenoids be involved, a liberal portion of the anterior part of the mouth of the œsophagus should be resected with the larynx.

In total laryngectomy, I prefer the one stage operation for the following reasons: When a preliminary tracheotomy is done and the trachea surrounded with gauze to establish peritracheal adhesions, the object aimed at is to prevent extension of infection to the mediastinum. This possible good is outbalanced in my opinion, by the fact that at the second stage we are forced to operate in a well-established septic field. Another objection is that a primary union between the skin and tracheal mucous membrane is seldom possible when the trachea has been mutilated and the surrounding tissues infected. A clean union here means that the patient may eventually dispense with the tracheal cannula. To wall off the trachea at the first stage and to leave it closed, would, I believe, be a more logical procedure in the two-stage operation.

Many points of interest arise in laryngectomy which, owing to limited time, I may but touch upon.

I am often asked what is the mental state of these patients after partial or total laryngectomy. Their acceptance of the new conditions under which they are forced to live has been to me a great surprise. Those who have escaped a recurrence or who think they have escaped it, are extremely grateful and uniformly cheerful.

Several of my laryngectomies have developed a remarkable degree of speech. Two of them have acquired a whisper, conveying words at short range.

In what cases should the gland-bearing tissue of the neck be removed? Unless this is thoroughly done, it is worse than useless. By the removal of gland-bearing tissue, I mean that all the fat and fascia of the region be taken away by a painstaking dissection, carried well backward into the posterior triangle and upward into the submaxillary region and downward to the clavicle.

When the arytenoids are involved, it is almost certain that the disease has entered the lymphatics of the neck, necessitating their removal. If the median line of the larynx is encroached upon behind, the dissection must include both sides.

How much of the œsophagus may be removed without

damage to its function? In all cases I remove the anterior part of the mouth of the tube, the extent being determined by existing conditions. At least one inch downwards anterior, and one-third of its circumference has been resected in five cases, without producing subsequent stricture.

Primary union is the exception in total laryngectomy. The wound infection in all my cases began above at the pharyngeal closure, manifesting itself between the third or fourth day. Liberal opening with drainage prevents or retards its spreading downwards to the danger zone behind the tracheal stump. This retardation is an important factor in the prevention of mediastinal infection, giving the retro-tracheal region time to become walled off. Wound infection with sloughing may not, after all, be an unmitigated evil, since it may by the eradication of disseminated cancer cells tend to retard or prevent recurrence. It has, I believe, done so in two of my cases.

In no case have I failed to secure primary union in the subsequent plastic repair following even extensive destruction of the tissues. The most important point here is to delay operation until long after the suppurative stage has passed.

Shock, pneumonic sepsis and mediastinitis are the ever-present dangers of laryngectomy.

Shock.—Very old and decrepit individuals should not be subjected to this operation. As short and light a general anæsthesia as possible should be given. In selected cases, I would suggest the use of local anæsthesia carried as far as can be done without pain, that is to the skeletonization of the larynx and trachea, then light general anæsthesia during the detachment of the larynx from the neck and the closure of the pharynx. The operation may be finished under local anæsthesia. Thus the ether period should not last more than twenty to thirty minutes.

Pneumonia.—Short and light general anæsthesia, the prevention of the entrance of blood into trachea during operation and of wound drainage after operation, and the removal of tracheal secretions by suction, materially lessen the danger of pneumonia.

Sepsis.—Diseased teeth and chronic sinusitis may be overlooked factors in the production of virulent septic wound infection in any neck operation where the pharynx is opened. I strongly advocate the removal of diseased teeth at a period as long before the operation as possible.

The removal of tissue for diagnosis is to be avoided if possible. Syphilis must be excluded.

Before describing the technique I shall ask your permission to digress and point out what seems to me to be some of the important points in the management of laryngectomy.

1. The operation should be so conducted as to absolutely prevent blood entering the trachea during the operation.

2. Wound contamination from the open trachea and pharynx should be guarded against during the operation.

3. In total laryngectomy two lines of drainage are indicated, one just below the pharyngeal closure and the other just behind the tracheal stump, where it is secured to the skin. The latter is of prime importance, crossing as it does, the direct path of mediastinal infection. In this situation unprotected, weak iodoform gauze is used to promote adhesions. If the infection from above can be delayed a few days (and in all of my infected cases it has been so delayed), the danger zone behind the trachea is eliminated and a primary union between the trachea and skin promoted.

4. A nourishing and properly balanced diet is essential from the start. The only means of accomplishing this is by the use of the feeding tube, introduced into the œsophagus through the nose at the time of operation, and left in place until the wound is healed. In one case the patient was thus fed for two months without producing œsophagitis.

5. When infection occurs, strict attention to drainage is imperative. The dressings should be changed every two hours or oftener during the day and every three or four hours during the night. At each dressing a negative pressure pump is used to remove the pus and tenacious mouth and pharyngeal secretions from the wound.

6. The total absence of lung complications in my case was partly due, in my opinion, to the use of inter-tracheal suction applied through a small catheter, introduced as far down as the bifurcation. This is used as indicated by the amount of tracheal secretion at least every hour or two for a few days following the operation.

Two physiological principles underlie the expulsion of secretions from the trachea, viz.: Normal ciliary action and normal cough. By normal cough I mean the compression of air behind the closed glottis and its expulsion by a sudden release of this closure.

In the open trachea normal cough is impossible and, following operative traumatism, the ciliary action of the tracheal mucous membrane is at least temporarily in abeyance. Hence there is a tendency for tracheal secretions, much increased after laryngectomy to enter the lungs, producing well known consequences. On this argument I contend that intra-tracheal suction rests on a logical basis.

The operation for hemi-laryngectomy is my own. Its radical departure from the accepted method of Gluck makes me put it forward with some hesitation. It has been done in six cases with six surgical recoveries. In all but one the larynx remained sufficiently open for normal breathing. In one there was some contraction, causing slight dyspnœa on exertion, and audible breathing at all times.

The operation for total laryngectomy is essentially the accepted method of the one stage operation with some modifications of my own in the technique and in the after treatment.

Operation for Hemi-laryngectomy.

Operation.—If it cannot be decided whether a thyrotomy or a hemi-laryngectomy is to be done, the larynx should be opened for inspection. Then, if hemi-laryngectomy is elected, before proceeding further with the operation, the trachea is opened just above the sternal notch. Two separate incisions are made, one for the laryngectomy and another for the tracheotomy. The first incision begins well up under the chin and extends to a point just below the cricoid ring in the centre line. This is deepened until the thyrohyoid membrane, the thyroid and the cricoid cartilages are exposed. Care is taken not to separate the tissues laterally. The larynx is then opened in the centre line, its interior cocainized and inspected. Blunt hooks or retractors are used in order to avoid injury to the edges of the cartilage, especially on the healthy side.

A hemi-laryngectomy being decided upon, the treachea is next opened as low as possible. The second incision is here made over the end of the sternal notch and up to within one inch of the first incision. Care is taken that a liberal bridge of tissue is left between the two incisions. The trachea is opened and a large tracheal cannula inserted. Into this is fitted a rubber tube, eighteen inches long, through which the anæsthetic is continued. Before inserting the tracheal cannula, two stout silk threads are passed through the edges of

the slit in the trachea, one on each side and laid one on each side of the neck. The wound is then closed fairly close up to the cannula. The object of the silk thread is to control the tracheal opening, in case the tube should get displaced or come out. Traction on these threads opens the trachea. This precaution I always take in low tracheotomies.

The larynx is again opened with blunt hooks or narrow retractors. The trachea is cocainized and tightly packed with gauze. The skin, cervical fascia, and pre-tracheal muscles covering the diseased half of the larynx are carefully dissected away from the cartilage, taking care to keep them all in one flap and not to injure the inner surface, which is composed of the pre-tracheal fascia, as this surface is to form the new laryngeal wall. This flap is gently held away while the removal of half of the larynx proceeds. The thyrohyoid membrane is slit laterally and the trachea divided in half its circumference below the cricoid ring on the diseased side. A large wad of iodoform gauze is packed into the pharynx to prevent contamination from that quarter. This is removed through the mouth when the operation is near completion. The loosened half of the larynx is now retracted, well away from the centre line. If the mucous membrane over the posterior commissure and arytenoid is healthy it is saved and lifted away from the cartilage beneath. This mucous membrane dissection is carried backwards over the posterior surface of the arytenoid where it becomes continuous with the anterior aspect of the mouth of the œsophagus. The diseased half of the larynx is now removed in the usual way, being careful to save the mucous membrane flap outlined above. All bleeding points are controlled by catching only the vessels and by tying with a 00 iodized catgut. Stress should be laid upon careful and non-traumatic hæmostasis. I would here digress to say that the usual rough handling of tissues, so frequently seen in general surgery, is entirely out of place in this operation. Much of the ultimate result depends on gentleness. The next step in the operation is to endeavor to cover with mucous membrane as much as possible of the raw surface left by the hemilaryngectomy. For this purpose the flap mentioned above is brought downward and outward. It may sometimes be further enlarged by splitting the mouth of the œsophagus. A considerable part of the raw surface left by the removal of half of the larynx may thus be covered. Stitches of fine

iodized gut are placed so as to hold the flap in its new position, care being taken that tension is avoided. The tracheal packing is now removed and the trachea cleared of blood clot down to the cannula. A long three-quarter inch, folded strip of vaselined gauze, thoroughly impregnated with bismuth, is packed into the trachea, filling it from the cannula to its open end. This strip should be folded back and forth in the trachea, so that its removal may be more easily accomplished, and it should be packed in tight and even. To prevent the lower end of the gauze from falling into the trachea and to facilitate tight packing, a drawing string is run through the gauze, being attached to its lower end. When the packing is in place this string is drawn up thus approximating the two ends of the gauze. This corks the trachea against secretions from above. The end of the strip is brought out at the lower end of the laryngeal incision. The larynx is packed loosely with a strip of iodoform gauze, the end of which is brought out at the same point as the tracheal packing. The gauze in the pharynx is removed through the mouth and the feeding tube is inserted through the nose and directed into the œsophagus.

Closure.—The mesial edge of the pre-tracheal muscles (the under surface of the lateral flap) is now united to the mucous membrane of the healthy side of the larynx, along its anterior median aspect, using fine iodized gut. The skin edges are united with silk-worm gut. The wound is left open at its lower angle, wide enough to give drainage room for the gauze ends. Two provisional stitches are placed here to be tied after these strips are removed, thus entirely closing the larynx. A sheet of rubber tissue, covered on both sides with gauze, is glued by its edge with collodion to the neck, across the bridge of skin separating the two wounds. This attachment should extend laterally one half way around the neck. Its object is to act as a barrier between the laryngeal wound and the tracheal cannula, keeping the drainage of the one away from the other. The quantity of drainage that comes from the laryngeal wound saturates several pads of gauze a day, and makes one feel that if only a fraction of it should find its way into the lung through an open trachea, pneumonia might well be the result. The bismuth in the tracheal plug keeps it clean and odorless for days and with the vaseline effectually turns the drainage out towards the surface.

After Treatment.—There are a few points in the after treatment on which I would lay emphasis.

Paramount, in this regard, is a liberal and supporting diet. Without the use of the œsophageal tube it is impossible to give enough food to support these patients through the important early days of convalescence. The diet I prescribe is as follows: Oatmeal thoroughly cooked and strained, mixed with milk. To the above may be added milk, sugar and raw egg, and occasionally melted butter. Six ounces of this thick mixture are forced through the tube with a piston syringe every four hours, followed by four ounces of water. Fruit and vegetable juices are later added.

The œsophageal tube may be retained for weeks without injury, providing it is washed out after each feeding as stated above. If by accident it should come out and cannot be replaced I would not hesitate to do a gastrotomy, so important do I consider liberal feeding. Rectal feeding, in my opinion, should not be relied upon. It is merely an effective way of pretending to do something.

In some cases tracheal and bronchial secretion is much increased. In one case, a diabetic, crusts and plugs of inspissated mucopus formed in the trachea and primary bronchi and had to be removed with a bronchoscope and forceps twice a day to obviate suffocation. A negative pressure pump is used to unload the trachea as often as indicated. Strong suction may do much injury to the mucous membrane and should be avoided.

The dressings need constant attention. They should be changed every few hours. The patient's position should be frequently shifted from side to side and from the recumbent to the reclining posture.

When the laryngeal drain should be removed depends upon the amount of drainage. It should be kept in as long as the serous flow continues. In my limited experience this is from two to four days. I remove the tracheal plug later for the reason that the blood and serum which flows into the larynx when disturbed by the drainage removal is thus prevented from entering the trachea. The tracheal plug may remain from three to five days. The tracheal cannula should be removed just as soon as the new larynx is open for comfortable breathing. If there is much tracheal secretion, tracheal drainage is best served by keeping the cannula in and using suction.

Operation for Total Laryngectomy.

At the cancer age clean mouths are the exception. Carious teeth, and Riggs' disease make this cavity a veritable cesspool into which our operative field must extend, and out of which must come almost unavoidable infection. Before operation this condition should be remedied as far as time will allow. Chronic sinusitis must be borne with since it would be quite impossible to correct it in the time given. Any effort in this direction would but change a chronic into an acute process with added risk of wound contamination.

If the patient will submit, the preliminary part of the operation may be done under local anæsthesia, carried as far as the tolerance of the patient and the skill of the operator permit. When the larynx is filled with carcinoma and the breathing is obstructed, local anæsthesia obviates the danger of suffocation and of an emergency tracheotomy during the early stage of the operation. Such a tracheotomy would mutilate the tracheal stump, making the subsequent skin and tracheal union defective. It is quite possible to skeletonize the larynx and upper portion of the trachea without pain. At this point it is better, I believe, to begin the general anæsthesia rather than attempt the removal of the larynx by the local method, since gagging, vomiting and coughing hinder the surgical procedure and add another infective factor.

If scopolamine morphine has been given great care in the administering of the general anæsthetic must be taken to guard against respiratory failure. I am inclined to use as little as possible such noisy adjuncts as the insufflation anæsthesia apparatus which interferes with the close observation of the patient's respiration. The removal of the larynx and closing of the pharynx is done under light ether anæsthesia. The remaining steps of the operation are better done under local, with an occasional whiff of ether if needed.

When, owing to the extent of the disease, a block dissection of the neck is indicated the procedure is as follows:

An incision from the chin to the sternal notch is made, including all the tissues down to the deep fascia. From the upper end, extending laterally on one or both sides a second incision is carried outward across the sternomastoid just under the mastoid process. The third incision begins at the lower end of the first one and is carried outward and downward,

crossing the clavicle near its outer third. The object aimed at is to make the flap as wide at its base and as thick as possible. My experience with the rectangular flap generally used, has been that the inner edge is prone to slough from lack of nutrition. Much time is often wasted in trying to save the sterno-mastoid muscle. It is my custom to remove it entirely, thus gaining an immediate and good exposure of the deep structures of the neck. It is detached below and with it all the underlying gland and lymphatic bearing tissues are removed *en masse*. The wound is temporarily packed with gauze and the removal of the larynx proceeded with.

When a block dissection is not indicated the procedure is as follows:

The first incision, as described above, is made. From its upper end two incisions are carried laterally for about one inch. This wide opening on top gives better access in the work of closing the hypo-pharynx. In long thin necks the lateral incisions may be dispensed with. The thyroid bridge is tied and cut. In three cases I have been obliged to remove a portion of the thyroid gland overlying the trachea. The larynx and trachea are skeletonized and the thyrohyoid membrane exposed. The greater wings of the thyroid cartilage are cut and left in position. All vessels are tied and the wound made perfectly dry. The trachea is cut across just below the cricoid cartilage, being careful to secure all bleeding points so that no blood enters the trachea. A rubber tube ten inches long and large enough to fit tightly is inserted into the trachea. Through this tube the anæsthesia is continued. The cleavage plane between the larynx and œsophagus is now found and the larynx separated upwards as far up as is compatible with the extent of the malignant growth. If the cancer extends backwards into the œsophageal mouth that portion of the latter lying in juxtaposition to the larynx must be removed. The larynx is now allowed to drop back into position and the thyrohyoid membrane is cut across, opening the hypo-pharynx —a large piece of gauze, either of iodoform or wrung out of a 1 per cent. Dakin's solution, is crowded into the pharynx filling it and the mouth. The larynx is removed, either taking or leaving the epiglottis. The hypo-pharynx is closed with two lines of fine chromic gut sutures. Before the first line is entirely closed the gauze is removed from the mouth and a feeding tube of suitable size rubber is passed through the nose

and guided into the œsophagus to a depth of five or six inches. I have seen persistent vomiting caused by inserting the tube too far. Two lines of drainage are indicated—one just below the hypo-pharyngeal closure and the other behind the tracheal stump. They are inserted through stab wounds in the flaps. If a gland dissection has been done a third drain is placed in the lower outer angle of the wound. The wound is then closed in layers with No. 2 iodized gut, or it may be closed *en masse* with silver wires, piercing the tissues deeply and clamped with large shot.

The tracheal stump is pulled forward and two retention sutures of silk-worm gut or silver wire are passed around the third or fourth ring, using a sharply curved stout needle. The ends of these sutures are plunged through the tissues and brought out about one inch from the central incision on either side of the trachea. They are tied around pieces of gauze, sufficient tension being exerted to hold the stump forward. A cuff of mucous membrane is made at the tracheal end by removing the cartilage of the first ring. The subcutaneous fat is removed from the skin in the immediate vicinity of the stump to facilitate bringing the skin and mucous membrane together. Union is made with horse hair on the front and sides of the stump and with silk-worm gut behind. Tension due to a sagging trachea must be avoided in joining the skin and mucous membrane. A large cannula wound with iodoform gauze and smeared with vaseline is inserted into the trachea, fitting its caliber snugly—an eight-inch square of rubber dam perforated in the centre is snapped over the exposed end of the inner tube of the cannula. Behind this apron the wound is dressed in the usual way. The cannula inserted as above described effectively corks the trachea, preventing secretions from below being coughed up over the trachea skin union. The rubber apron catches tracheal secretions and serves as a barrier between the end of the cannula and the wound in the neck.

After Treatment.—Feeding and the care of the tracheal secretions are set down under the after treatment of hemilaryngectomy. As wound infection is the rule in total laryngectomy, its proper surgical management is perhaps the most difficult and most important part of our task. Infection begins, as a rule, at the hypo-pharyngeal closure. To delay too long in opening the upper part of the wound is a fatal error,

since the virulence here encountered is high and spreads rapidly. After the wound is opened the packing should be changed every two to four hours and the field cleared of secretions by suction. The continuous or intermittent use of hypertonic salt solution does much to promote exosmosis and thin the discharges. If the infection extends to the tracheal region constant attention on the part of the nurses and surgeon is required to prevent the inhalation of pus and the extension along the trachea to the mediastinum. All burrowing pockets are carefully followed, frequently packed and cleaned by suction. Nowhere in the body, with the exception of the brain, is uncontrolled infection more serious than in the neck. Such success as has come to me in this work has been, I believe, due to the time and pains taken in the after treatment, to the use of very little general anæsthesia, and to a constant effort towards elimination of traumatism from the operative technique.

BLOOD CHEMISTRY AS IT REFERS TO ACIDOSIS AND BLOOD SUGAR

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Normal blood reaction like normal temperature is one of the most important physiological constants. This "reaction" is more commonly referred to as the hydrogen-ion concentration. By ionization we mean the dissociation of molecules of acids, bases and salts, under the influence of a solvent (water) into their positive and negative components or *-ions*. These are known respectively as cations (+) and anions (−) carrying with them positive and negative charges of electricity. All acids contain hydrogen (H) ions and all bases contain hydroxyl (OH−) ions. Hence if hydrogen ions predominate a substance is acid and if hydroxyl ions are in greater number it is basic.

The hydrogen-ion concentration of the blood is only very slightly greater than that of distilled water, but it is potentially much more alkaline than distilled water. Henderson,[1]

however, believes that the value of hydrogen-ion concentration estimations have been over-estimated since acidosis may exist with this at a normal level owing to the excessive removal by the lungs of the CO_2. His definition of acidosis is "any modification of the normal equilibrium between acids and bases within the organism whereby the power to neutralize acid is diminished. This need not involve an acid reaction of the blood, nor the presence of free acids, but it does involve some change in the normal equilibrium of acids and bases and diminishes the power of resisting acid. What is essential and common to all conditions of acidosis is a depletion of the alkali of the body and especially of the bicarbonates of the blood."

Henderson calls bicarbonate the third element of the blood, considering water first and sodium chloride second.

Since normal metabolism and cellular activity demand such a constant reaction it necessarily follows that there must be some very delicate and sensitive regulatory mechanism which shall rapidly respond to the slightest variations of this reaction, to thus set in operation some process or processes whereby the normality of the serum may be restored. The respiratory centre in the medulla is this regulatory indicator whereby pulmonary ventilation is increased markedly by an increase in the hydrogen-ion concentration, which is too small for any laboratory device to detect.

Metabolism gives rise to certain acid products, relative CO_2 excreted by the lungs, and non-volatile acids or "fixed acids" excreted normally by the kidneys, thus maintaining the normality of the serum bathing the tissues.

The chemical composition of the blood is so constituted that the balance of weak acids and bases allows the maximum addition of acid substances with the minimum change in the reaction of the blood. In the regulation of this reaction Rowntree[2] gives the following factors:

(1) The excretion of CO_2 by the lungs.

(2) The separation by the kidney of an acid urine from an alkaline blood.

(3) The ability of the blood to take up considerable amounts of acid or alkali without affecting its reaction, or the "buffer" action of the blood, due to its content of carbonates, phosphates and protein.

(4) The formation of ammonia to neutralize acid when fixed bases are no longer available.

In the formation of CO_2 in the tissues and blood the bicarbonate of sodium plays a very important part as stronger acids readily replace the CO thus:

$$NaHCo_3 + HCl = NaCl + H_2O + CO_2$$

and a neutral salt results. In twenty-four hours the equivalent of several hundred cubic centimeters of normal acid are thus eliminated by the lungs.

The kidney possesses the very remarkable power of being able to conserve bases to the body thus:

$$Na_2HPo_4 + HCl = NaCl + NaH_2Po_4.$$

Here the disodium phosphate reacts with HCl and a neutral salt is formed and the sodium binds both the phosphoric and hydrochloric radicles. The body is thus freed from acid and acid phosphates. Or again:

$$Na_2HPo_4 + H_2O + CO_2 = NaH_2Po_4 + NaHCO_3,$$

and thus more carbonate is added to the reserve of the body.

To determine the alkali sparing function of the kidney, Palmer and Henderson titrated with alkali the acid urine back to the reaction of the blood and it was found that from 200 to 800 cc. of N/10 alkali was spared daily in normal subjects.

Dr. Lawrence Henderson gives an apt illustration thus: "If an acid is poured into an aqueous solution of carbonic acid in equilibrium with the air, to which a certain amount of sodium bicarbonate has previously been added, the acid will react according to its concentration and avidity for base, to a greater or less degree with the bicarbonate, forming in due amounts its own salt and free carbonic acid, which must escape into the air, since the solution was already in equilibrium with the carbonic acid of the atmosphere."

To be concrete—add to a solution of sodium bicarbonate, half of the equivalent amount of hydrochloric acid, and in time this solution will contain just as much free CO_2 as before, but it will contain only one-half the bicarbonate.

$$2NaHCo_3 + HCl = NaHCO_3 + NaCl + H_2O + CO_2.$$

In the body it is thus that acids and bicarbonates react. The resultant CO_2 is liberated by the lung, as it is here, into the atmosphere, but with this difference. The disturbed equilibrium between acid and base thus occurring in the human body by the undue production of acid and depletion of

base, causes the respiratory centre to be stimulated and more CO_2 is removed than formerly in nature's effort to readjust matters. The tension of the CO_2 in the blood thus tends to be reduced almost in proportion to the reduction in bicarbonates. Hence it is that the estimation of the CO_2 combining power of the blood if found reduced in cases of acidosis indicates also reduction of available bicarbonate and calls for it in treatment.

While to this extent acidosis is of simple explanation its effects are of far-reaching complexity. Again to quote Henderson: "The acid-base equilibrium is involved in a great variety of other equilibria, e.g., osmotic pressure and volume; it influences the distribution of electrolytes between corpuscles and plasma, the state of colloids, hence perhaps the union of oxygen and hæmoglobin; it modifies the activity of enzymes; it modifies the general metabolism and activities of the lungs and kidneys, and is probably involved in many undiscovered phenomena."

Woodyatt[3] gives a very interesting discussion on acidosis in diabetes and explains that in oxidation of three molecules of fatty acids at least one molecule of carbohydrate must be burned. If this ratio is not maintained incomplete combustion occurs and the body "smokes" with unburnt fats, like an automobile with too much oil in the cylinders. These unburnt products, acetons, beta-oxybutyric acid and diacetic acid appear in the urine. The carbohydrate utilization is low and hence if the fats are not reduced in proportion to carbohydrate this phenomenon is apt to occur.

Howland[4] cites two types of acidosis in children, one with acetone bodies in the urine and the other without. The finding of acetone in the urine is not essential, nor is acidosis necessarily present because acetone is found.

Dyspnœa, restlessness or at times lethargy, or coma, vomiting, diarrhœa, are clinical accompaniments which vary greatly in different cases. Rowntree lists the following as often having acidosis association:

1. Diabetes.
2. Renal, cardio-renal, cardiac cases.
3. Cachexias and anæmias.
4. Severe diarrhœa.
5. Cholera.
6. Starvation.

7. Pregnancy and eclampsia.

8. Post-operative or post-anæsthetic conditions, especially surgical shock.

9. Certain febrile states.

It is admitted by those most competent to express an opinion that the question of acidosis is not very thoroughly understood. So many evidences of its presence are continually being met with in recent literature, due to the improvement of the means for its detection that more and more attention must be paid thereto.

The treatment is bicarbonate of soda by mouth, bowel or intravenously. Care should be exercised as its excessive use may result in an equally fatal alkalosis, as Rowntree points out.

In children as well as in diabetic adults the neutralization of the acidosis may be thoroughly accomplished as controlled by laboratory procedures and yet the patient succumb. For some reason the normal metabolic processes are not restored by this correction. The very important equilibria disturbed with the advent of disturbed acid and base equilibrium is probably responsible for this unfortunate outcome. It is held that the earlier the condition is detected the better the opportunity for cure.

Professor Yandell Henderson[5] remarks "Strange states that the normal period that one is able to hold the breath is between thirty and forty seconds. He considers any period under twenty seconds as contraindicating general anæsthesia." This then is a very useful test, and in diabetes or those suspected of acidosis, may be used as a comparative test of their condition from time to time.

Its detection by laboratory methods has been rendered very accurate by the work of American investigators, and among these methods the ones used commonly are the CO_2 tension of alveolar air and the Co_2 combining power of the blood plasma.

I realize that these brief remarks are not very conclusive. I have merely tried to review briefly the current conception of this very comprehensive and interesting subject.

The Significance of Blood Sugar Estimations.

Why is it advisable to do a blood sugar estimation? Because we have to differentiate between the conditions of diabetes mellitus and renal diabetes. By renal diabetes we mean

a condition characterized by glycosuria but without hyperglycæmia, thus differing from diabetes mellitus which has both glycosuria and hyperglycæmia. The normal blood-sugar content is 0.08 to 0.18 per cent., and in renal diabetes the kidneys are very permeable to sugar, allowing some of this to appear in the urine. In diabetes mellitus, on the other hand, the blood-sugar is increased to 0.3 per cent. or more.

Renal diabetes by some is looked upon as an early phase of true diabetes mellitus, but by others this is controverted.

Pregnant women occasionally have glycosuria which persists until confined, to recur whenever they become pregnant again. They do not show any hyperglycæmia and should not be classed as incipient diabetics.

The so-called alimentary glycosuria may be thus confirmed, i.e., cases who cannot tolerate or dispose of sugar in excess without it appearing in the urine.

In the treatment of diabetes it is of great assistance for the individual should not only be freed from glycosuria but should also have his blood-sugar quantity lowered if we are to have any pretence of a cure. The test is fairly easily done, requiring only a small amount of blood and serves as an excellent check over the conditions cited above. A mild hyperglycæmia may be found without glycosuria, and in cases of this kind showing impending trouble much may be done by way of dietary regulation to forestall the possible onset of a confirmed intolerance of carbohydrate.

References.

1. L. J. Henderson, *Trans. Assoc. of Amer. Phys.*, 1916, p. 58.

2. L. G. Rowntree, Diagnosis and Treatment of Acidosis, *Trans. Assoc. of Amer. Phys.*, 1916, p. 40.

3. R. T. Woodyatt, *Trans. Assoc. of Amer. Phys.*, 1916.

4. John Howland, *Trans. Assoc. of Amer. Phys.*, 1916.

5. Yandel Henderson, *J. A. M. A.*, LXIII, 318.

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Editorials

THE FOTHERINGHAM, ASHTON, ROSS, ELDER REPORT

We desire again to call attention to the fact that the above is, in a very important sense, the proper title for what has been called the " Baptie Report." If anything is wrong in that report, these four distinguished Canadian doctors are chiefly responsible.

Such being the case, it was scarcely chivalrous or courteous for members of the Canadian House of Commons to attack Sir William Baptie, V.C., when he was in no position to reply; nor was it very brave or chivalrous on the part of the Government not to say one kind word for Sir William Baptie under the circumstances. Is it possible that no member of the House had any correct knowledge as to Sir William Baptie's work in Mesopotamia? If Baptie had been incompetent in his work there, that in itself should not affect the value of the Fotheringham-Elder report in any considerable degree, because this distinguished British officer simply acted as Chairman, and probably did not write or inspire one sentence in the report. We have to admit, with very deep regret, that we stated in our last issue that Baptie was an incompetent man. That opinion was founded on the report of the Mesopotamia Commission which investigated medical military matters in that district as quoted or misquoted by the late Minister of Militia on the floor of the House of Commons. It is quite true that the report contained the statement that Surgeon-General Baptie's work was unsatisfac-

tory in certain regards, but it did not express any opinion that he was incompetent. Moreover, opinion in that regard is clearly shown in the fifth sentence of Clause 51, which we give in full: " He is undoubtedly a man of great ability, and, having regard to all the circumstances, we desire to say that the faults of his administration were not, in our judgment, such as to prove him unfit for important responsible administrative posts."

This shows clearly the views of the commission as to his ability; but, in addition, we wish to state that the report was incorrect in blaming Baptie for certain faulty conditions over which he had absolutely no control. A couple of facts throw considerable light on the matter. First, there was no breakdown for six months after Baptie left India, and then only in connection with an extension of the campaign towards Baghdad, which was not even contemplated when he left. Second, his duty was to arrange for a small defensive campaign to retain our hold on Basra and the oil fields. After he ceased in any way to be responsible that purpose was abandoned, and extensive offensive operations 500 miles from the base were undertaken. The commissioners blame Baptie because the preparations were inadequate for this great adventure. This surely was unjust considering the fact that Baptie knew nothing about the great adventure.

We cannot pretend, of course, to discuss all the details of a report which was scarcely fair to the British Surgeon-General; but we wish to state emphatically that there is absolutely no doubt he is an able military officer, a high-minded, honorable man, well worthy of the position he holds in the R.A.M.C.

C.A.M.C. AT THE FRONT

One of our Canadian doctors who has been at the front about two years tells us something about their work in France, in a letter dated August 12th. We extract the following from his letter: " I had a front seat at Vimy and the fighting that followed. On April 9th I was in an underground advance dressing station with only a corporal to help me from 3 a.m. to 2 p.m., and between us we dressed about 250 wounded in that time. Gas shells bothered us for about an hour, but by using masks we were able to 'carry on.' A German medical officer, who was taken prisoner, wanted to help me, but there was no room inside, so I sent him to look after some of his fellow countrymen who were lying outside in the rain and snow, as were many of our own chaps. It was a rotten day, but I am glad to say that we got all the wounded away quickly . . . before nine of that night. Considering what we were up against, I think the Medical Corps had a right to feel well satisfied with the way the work was done. I went over the ground a few days later, and even then it was in bad shape, being a net-work of shell holes from four to eight feet deep, mostly full of water, with broken barbed wire everywhere. Unless you have seen it, you cannot form even a faint idea of what modern artillery means.

" Then I was sent to a Canadian C.C.S. to do X-ray work, but I wished they had left me where I was. It is at a C.C.S. that one sees the concentrated horrors of the results of modern warfare. The man who gets a wound in the arm or leg bad enough to put him out of the game is lucky.

"We are always anxiously watching events in Canada, and most of us are hoping to see a Union Government formed. At our mess-room we have discussed it frequently, and last night selected a cabinet headed by Borden and Laurier. You would be really surprised if you could see the moderate way in which even rabid party men here discuss the situation, especially as to pro and anti-conscription. '*C'est la guerre.*' It has stirred them all, and I do not wonder."

MEDICAL STUDENTS IN THE WAR

An interesting letter appeared in the *B.M.J.* in July referring to those medical students, who, in answering their country's call, gave up their studies and their prospects of early qualification. The writer's only son to whom he was looking for relief, accepted a commission in 1914, when in his second year. He has now been on foreign service for over two years, and if he is not killed looks like serving two years more. By that time he will be 24 years of age, and will have four more years before he can qualify, in addition to a certain amount of hospital work before he is fit to succeed his father. Meanwhile those students in his year, who, quite as fit as he, resisted their country's call, are now enjoying complete immunity from service, together with good hospital appointments at £90 a year. Whether patriotism pays or otherwise, the father quite approves of the actions of his son. He is, however, anxious to know whether, if his son ever comes back, he will be granted any facilities for shortening the time of his medical course.

CASUALTIES IN R.A.M.C.

We remember that in the first weeks of the war Surgeon-General Fotheringham, in explaining the methods of the Medical Corps in war, said that the medical military men would be exposed to serious dangers. We have heard a good deal about the high mortality of the R.A.M.C, and to some extent of the C.A.M.C., but in certain quarters reports as to these casualties are untrue.

Among the members of the British Commission which accompanied Mr. Balfour in his visit to the United States, was Colonel T. H. Goodwin, one of the most prominent military surgeons of Great Britain. In his address at Cornell University, Col. Goodwin said, " There is a report abroad that I have stated that over 6,000 of the R.A.M.C. have been lost in this war. I desire now to say that I made no such statement. Any report of the sort is totally untrue. Our whole medical force is only 12,000. Although the casualties did not amount to 50 per cent., still they are sufficiently serious. In the R.A.M.C. we understand that about 60 medical officers were killed and 190 wounded."

Colonel Goodwin, R.A.M.C., some of whose utterances were quoted in another column, spoke often and well while in the United States. We extract the following from his address delivered at Philadelphia, July 25th:—

The first gas attack occurred in April, 1915. Chlorine gas was used. We were utterly unprepared for such an onslaught, when one moonlight night a change in the wind enabled the enemy to send over clouds of this gas. Within ten minutes hundreds were dead. At dawn the trees for miles were seen to

be leafless. Looking back to that time it would seem impossible that our men could hold against the enemy, yet they did magnificent work.

Things such as love and strength and the soul of man cannot be bought with a price. The love which has grown up between France and England in this war will not die with the termination of this struggle, but it will last while the memory of this war lives. I also believe that the two great English-speaking nations can never, while the English language is spoken, again be separated.

I have been sent over with Mr. Balfour to ask if the United States of America will send England physicians and nurses. The answer to my appeal has been generous and prompt. I understand that this city has occupied a very prominent position in offering its medical men. May I ask that the work begun so very well may be continued without any relaxation of effort? Thousands of medical men will be required to meet the needs of the American army before and after it leaves this country. For the sake of your country, your sons and brothers going to France, see that your army has an ample supply of medical men; if there is any shortage the amount of suffering and loss of life will be appalling.

Much as our women have always merited respect and admiration, never have they been shown to greater advantage than in the last three years. The women of France and England have been simply magnificent. I believe every woman in England has borne sacrifice. I cannot tell you how much the French nation owes to its women; they have lost everything, yet they have borne this loss uncomplainingly. I am afraid that many American women will have to endure loss; perhaps not to the extent of the French and English. Yet they will bear it as have their French and English sisters, and as women have borne loss in all the years. In the lessening of this loss the largest factor will be the sending of your medical men into the army.

News Items

On September 1st there were 20,000 Canadians in hospitals in the United Kingdom, and 9,000 in Canada.

The Duke of Devonshire formally opened a new Sanitarium for Tuberculosis at Weston, Ontario, August 19th.

A Toronto druggist was fined $100 and costs, September 15th, for selling several quart bottles of whisky without doctor's certificates.

Much interest was taken in the Model Baby Clinic held by the Ontario Board of Health at the recent Canadian National Exhibition.

Mrs. Thayer, wife of Dr. Wm. S. Thayer, of Johns Hopkins Hospital, Baltimore, died August 29th. Dr. Thayer is now in Russia.

We are very much pleased to learn that there is no foundation for the rumor that Sir Alfred Keogh intended to resign from his position of Director-General of the R.A.M.C.

The Ontario Medical Council is endeavoring to obtain a complete census of medical men in the Province. We are told by the committee in charge that there are now on the register 3,280, and of those 534 are in service abroad or at home.

The young ladies of the Red Cross Society of Orillia made a house to house canvass of the town, August 23rd, and received subscriptions to the extent of $10,000. This was the final round-up in the campaign for $50,000 for the Orillia Soldiers' Hospital.

Chatham House, at Ramsgate, England, which has been used for some time as a Canadian Military Hospital, was bombed by the Germans in their raid of August 20th. One member of the staff was killed, and five severely wounded. Considerable damage was done to the Hospital.

We were glad to learn, Sept. 8th, that the University Unit left Saloniki in August, and reached England September 7th. They are now in what is known as Number 4 Canadian Military Hospital (recently erected), Park Prewett, Basingstoke, a town of about 10,000 inhabitants, situated fifty miles south west of London.

It was expected that the meeting of the American Public Health Association for this year would be held in New Orleans in December. After the declaration of war the executive made a change, consequently a special war meeting of the Association will be held in Washington, October 17th to 20th, under the presidency of Dr. Wm. A. Evans, of Chicago.

One of the most interesting Medical Officers' Training Camps in the United States is that situated in the Government Reserve, close to the ground made historic by the battle of Chickamauga, fought in November, 1863. The camp is composed of 36 frame buildings or cantonments, and each of these buildings will accommodate 75 men. There are at present in the camp about 2,500 men.

Sir Watson Cheyne was elected, on August 10th, parliamentary representative of the Universities of Edinburgh and St. Andrew's without a contest. Sir Watson, in returning thanks, said he intended to go on with his consultant work for the Royal Navy till the end of the year, but hoped to give up private practice soon and devote his energies to fighting a new science—the business of politics.

We are glad to report that Dr. Andrew MacPhail (Capt.), of Montreal, has been promoted to the rank of Major. After serving in France for nearly two years, he was ordered back to England, and was attached to the Canadian Medical Headquarters in London. He was lately placed in charge of the 3rd Army Medical Department.

Queen's Visit to France

During the visit of the King and Queen to the armies in France, Her Majesty spent most of her time in seeing the medical arrangements in the more representative hospitals at all the bases. Particular attention was paid by the Queen to the arrangements for the nursing staffs, the homes for sick sisters, as well as for those who are convalescing.

Glycerine and Sugar

As previously announced, many preparations containing glycerine and sugar have recently been withdrawn from the *British Pharmacopœia*. The Government also issued a memorandum to physicians asking them to economize in the use of these substances. The General Medical Council has made fresh representations to the effect that such economy is now needed more than ever before.

An Apology

We regret that through a typographical error an unintended meaning was conveyed in our review of Dr. Joslin's book on *The Treatment of Diabetes*, in the September number. We spoke of the book as "essentially a personal one," but the printer made it "perennial." Apologies to Dr. Joslin and his publishers, Messrs. Lea & Febiger.

Personals

Dr. John A. Oille has removed his office from 708 Spadina Avenue to 112 College Street.

Dr. Donald McGillivray (Capt.) has much improved in health since he returned to Toronto.

Dr. John Malloch, of Toronto, has been promoted to the rank of Major, and is with the hospital unit at Basingstoke.

Dr. James Fielding, formerly of Bowmanville, Ont., died in the City of Norwich, England, August 31st, aged 73.

Dr. Frank McKinnon (Capt.), Winnipeg, and Dr. Walker, of Stoney Creek, were similarly honored.

Dr. Gerald Cosbie (Capt.), of Toronto, has been awarded the Military Cross for bravery at Vimy Ridge.

Dr. F. Montizambert, Director-General of Public Health, returned from the Pacific Coast to Ottawa, Sept. 1st.

Dr. Haywood, formerly assistant superintendent of the Toronto General Hospital, who was overseas for more than two years, is now acting as Superintendent of Montreal General Hospital.

We are sorry to announce that Dr. Charles A. L. Reed, of Cincinnati, who is well known in Canada, suffered a cerebral hæmorrhage in Atlantic City, August 23rd. It was reported Sept. 4th that he was improving.

The following Doctors from Canada have recently been mentioned in dispatches: Lt.-Col. Amyot, Toronto; Col. Ashton, Brantford; Capt. G. S. Bonycastle, Toronto; Lt.-Col. Goldsmith, Toronto; Major McCoy, Toronto; Lieut. Chevey, Major Gibson, Capt. Thos. Graham, Maj. W. H. Greene, Capt. W. C. Hall, Major Harcourt, Capt. Holmes, Lt. Kennedy, Lt.-Col. Hume, Capt. T. W. Lawson, Capt. Leslie, Lt.-Col. Macfarlane, Lt.-Col. McGee, Capt. W. C. Marshall, Capt. G. V. Morton, Lt.-Col. Raikes, Capt. L. M. Rathbun, Maj. J. R. Roaf, Lt.-Col. R. D. Rudolf, Maj. G. B. Saunders, Capt. L. P. Sherwood, Capt. H. A. Symons, Capt. H. C. Snively, Lt.-Col. Clarence Starr, Capt. D. D. Wilson, Maj. Robt. Wodehouse.

Book Reviews

Practical Materia Medica and Prescription Writing. By Oscar W. Bethea, M.D., Ph.G., F.C.S., Assistant Professor of Materia Medica, Tulane University of Louisiana. Second revised edition. Philadelphia: F. A. Davis Co., publishers.

The author of this very excellent treatise considers that in the treatment of a disease the doctor should diagnose first the condition, and then select the agents which will be most effective in curing the faults of the condition.

In Part I he gives a number of definitions of various medical terms and expressions which will be found very interesting (something unusual in a sort of dictionary), and also exceedingly useful. The main portion, however, is taken up with a description of all official drugs, and of some others which, though not official, are frequently prescribed. In Part II he gives excellent instructions as to the best methods of prescribing.

The book on the whole is good, particularly practical, and in every way well suited for the wants of the general practitioner, who very properly places a high value on useful hints in therapeutics.

Poliomyelitis in All Its Aspects. By John Ruhrah, M.D., Professor of Pædiatrics in the University of Maryland Medical School and the College of Physicians and Surgeons, and Erwin E. Mayer, M.D., Instructor of Medicine in the University of Maryland Medical School and College of Physicians and Surgeons. Lea & Febiger, Philadelphia and New York, 1917.

This work attempts to set down in 275 pages all that is known at the present time of the terrible scourge which recently visited this continent. The literature on the subject has gone out of all bounds, so that a short summary in book form will be welcomed. The authors have succeeded well in their purpose, and the physician will find this volume most interesting and instructive. The chapters on treatment are particularly to be commended.

Obituary

GEORGE L. MacKINNON, M.D.

We have to announce with deep regret that Dr. G. L. MacKinnon, of Alton, died September 14th, aged 74. He graduated M.B. from the University of Toronto in 1905, and passed the examination of the Ontario Medical Council in 1906. After passing the Council he commenced practice in Alton and very soon became successful.

ALEXANDER STARK OGG, M.D.

Dr. A. S. Ogg of New South Wales, Australia, died in Sidney, Australia, August 7th, aged 62. In his boyhood days he lived in Dundas and graduated from the University of Toronto in 1878. Soon after graduating he went to Australia and practised there for many years with much success.

GEORGE W. LING, M.D.

Dr. G. W. Ling died at his home in Dutton, Ontario, September 16th, aged 74. He was born in Hamilton, and received his medical training, the early part at Ann Arbor, Mich., and the latter part in Toronto. He graduated from the University of Toronto in 1866 and thereafter practised successfully in Melbourne, Wallacetown and Dutton.

GEORGE H. CLEMENS, M.D.

The many friends of Dr. G. H. Clemens of 1392 King West, Toronto, were greatly shocked and grieved to learn that he was found dead in his bedroom on the morning of September 23rd. He had always been apparently healthy, but lately suffered from "weak heart spells." He was bowling at Parkdale Club on the afternoon of September 22nd and feeling well. During the night he went out to see a patient, returned to his home and fell dead while undressing. He was 61 years old and was born in Waterloo County. He graduated M.B. from Toronto, and M.D. from Victoria University in 1880. He then practised in Kitchener for a short time, then for some years in Port Perry. He removed to Toronto in 1898.

GEORGE BURNHAM, M.D.

Dr. George Burnham, of Peterborough, died at his home in that city, September 17th, aged 74. He received part of his medical education in New York, and graduated M.D. from the Bellevue Hospital Medical College in 1866. After studying another year in Toronto he graduated M.D. from Victoria University in 1867.

GEORGE R. McDONAGH, M.D., L.R.C.P., LOND.

The many friends of Dr. George R. McDonagh, of Toronto, were greatly grieved when they heard last winter that he had become seriously ill in Los Angeles, Cal. For several reasons it was deemed advisable for him to return to the East. When he reached New York the surgeons in charge placed him in the Memorial Hospital, where he underwent treatment for some time. In describing his own condition to a friend in Toronto, he said the doctors found disease in the right ilium. He steadily grew worse, and early in August he was brought back to his home in Toronto. As was expected, he became weaker, until August 26th, when he died at the age of 61. The immediate cause of death was pneumonia. We do not know exactly when his illness commenced, but we understand that he suffered more or less from neuritis during the whole of the summer of 1916, but the cause of the neuritis was not discovered until the X-ray (taken in New York) revealed the bone disease.

He received his medical education in the Toronto School of Medicine, and graduated from the University of Toronto in 1876. He then went to London, England, and became Lic. Roy. Coll. Phys., Lond., 1877.

On his return to Canada he engaged in general practice for a short time in Goderich, the home of his early boyhood. Then he decided to take up a specialty, and went abroad to do post-graduate work, especially in Vienna. He then returned to Canada and commenced practice in Toronto as a specialist in diseases of the ear, nose and throat.

He had a fine presence, a charming manner, a great ability and good judgment, and wonderful manual dexterity, and he very soon achieved signal success, and for many years was recognized as the best man in his specialty in the Dominion of Canada.

He was particularly kind and courteous in his dealings

with general practitioners, who, as a general rule admired him greatly, and trusted him implicitly.

He was a great traveller, and for many years made it a rule to take an extended trip during each winter season. In those trips he visited practically all parts of the world. He was a very keen observer, had a wonderful memory, and had a more thorough knowledge of foreign countries than any other man whom the writer has ever met.

EDWARD REVERE OSLER

Of the many tragedies of the war none has caused more profound sorrow throughout the Anglo-Saxon world than the death of young Osler. On September 1st we were told that he had died of wounds. On September 5th we were told that Sir Edmund Osler had received official word of the death of his nephew, and on September 6th the following appeared in the daily press among the death notices:

"On the 30th of August, 1917, in France, of wounds received in action, Edward Revere Osler, Lieutenant R.A., only son of Sir William Osler, Bart., Regius Professor of Medicine, Oxford, England, and Grace Revere Osler.

He was the only child of Sir William and Lady Osler, and was in his 21st year. He was born in Baltimore, when his father was in residence at Johns Hopkins University. When the war broke out he was a student at Oxford, but when the call came he showed a determination to enlist at once. He was at first attached to the McGill University Unit. In a short time he grew tired of his work, which he considered rather quiet, and wanted something more strenuous. He then took a course in artillery and field work, and after completing it received a commission in the artillery.

As to the sadness of the tragedy comment, of course, is needless. It brings to the minds of many of us, however, some of the discussions in which we have taken part during the last three years—should only sons, especially such as Osler's, be allowed to go to the front? Probably most of us have been inclined to say no. But how can we prevent them? We can not. That is the magnificent part of it, and in this case we have the strongest possible evidence to show "that we are giving our best." How much our country is going to suffer in the future because of the loss to so many of our most valuable young lives no one can tell, or even try to tell; one simply shudders to think of it.

Selected Articles

REMISSIONS IN LEUKAEMIA PRODUCED BY RADIUM IN CASES COMPLETELY RESISTANT TO X-RAY AND BENZOL TREATMENT

In the *Boston Medical and Surgical Journal* of April 5th, 1917, Ordway states that the methods of administering benzol in the treatment of leukæmia have now become almost uniform. Capsules, in certain instances coated with salol, containing 0.5 gramme of benzol, are given with equal parts of olive oil to diminish the irritating local effect. Two of such capsules are given at first, increasing until ten—that is, five grammes a day—are administered. They should be taken immediately after meals and never during meals, and it is important that the patient should be kept in hospital during such treatment. It may take ten days to three weeks before the effect upon the blood is observed. It is customary to stop administering when the white count in leukæmia has been reduced to 20,000. Boardman states that sixteen out of one hundred cases failed to show improvement, and that another eight cases, although reacting favorably at first, died during or soon after the discontinuance of treatment. Also certain toxic effects have been reported, such as gastrointestinal disturbances, headaches, dizziness, skin eruptions, bronchial and kidney irritation, and hæmorrhages. Marked leukopænia with increasing anæmia and death may occur.

The technique for treating leukæmia by the Roentgen ray has been very variable, and this may account to a certain extent for the variations in the results obtained. Boardman (*loc. cit.*) states that the X-ray has produced improvement in from 20 to 50 per cent. of the patients—that is, 50 to 80 per cent. of the cases are refractory. In most cases the long bones as well as the spleen have been radiated. In many instances, however, too little attention has been paid to the principles of cross-fire and filtration (deep therapy). The principle of the so-called "cross-fire" is important for the successful application of radium or X-rays to large growths or to deeply-seated lesions. The method was first described by Domenici and has since been elaborated by others, notably in the treatment of uterine fib-

roids by X-rays in the Freiburg clinic by Kroenig and Gauss. The aim is to concentrate as much of the action of the rays as possible in the deep-seated lesions with the least possible injury to the overlying skin. This may, in certain instances, be accomplished by employing small tubes of radium scattered throughout a tumor mass or by surface applications of heavily screened radium or X-ray to a large number of areas on the skin so that each area will not be exposed too long or too intensely. This might be the result in applying the radium to a single area for the time necessary to produce the desired effect on the underlying lesion. By this cross-fire method enormous doses, even 1000 to 1500 Kiemboeck units, may be applied to the deep lesion when not more than 20-X could be safely put through one particular surface area. Pfahler uses from 4 to 40 surface areas and passes a full dose through each, making a total of from 80 to 800 units.

To produce any marked effect upon the deeper tissues it is necessary to use screens or filters to check the less penetrating rays which would otherwise be absorbed by the superficial tissues and cause marked destructive changes there before the less numerous and more penetrating rays could act on the deeper tissues. In order to obtain the most penetrating X-rays for this method of so-called "deep Roentgen therapy," the well-known "Tiefenroentgen-therapie" of the Germans, it is necessary to employ a hard tube of high degree of vacuum and an electrical apparatus of high voltage. The rays are not all of equal penetratability, and it has been found that they are more homogeneous when the softer have been "filtered out" by an aluminum screen 3 millimeters in thickness. Certain roentgenologists also use a heavy piece of leather.

When radium is used for the treatment, screens or filters of lead 2 to 3 millimeters in thickness, of brass 1.2 millimeters, or other heavy metals such as silver, gold, or platinum, allow the penetrating hard beta and gamma rays to pass and intercept the alpha and soft beta rays which would otherwise be absorbed and cause destructive changes in the superficial tissues. As the amount of the more penetrating rays is only a small proportion of the total activity (less than 5 per cent.), it is necessary in deep therapy to make exposures correspondingly long.

The principles of cross-fire as well as deep therapy are made use of in the treatment of leukæmia by surface applications

of radium. The technique of such radium therapy may be illustrated by the striking effect of radium when applied in the proper manner to the surface over the enlarged spleen in cases of myelogenous leukæmia.

When from 50 to 60 milligrammes of radium element or millicuries of radium emanation are employed, evenly distributed over a surface applicator 2 x 2 cm. in diameter, and the filtration above mentioned is used, the radium may be left in each position from four to six hours—four hours if there are 60 milligrammes, six hours if there are 50 milligrammes and if the filtration is 3 millimeters of lead. With this amount of radium and the above technique it is possible for complete remission in leukæmia to occur with three series of treatments. Amounts of radium, however, as small as 25 milligrammes, even when this is in the form of a tube, have reduced the spleen to normal size, and have caused the characteristic improvement in the blood and in the general condition of the patient, but the time required is longer and the series of applications more numerous.

It has been the practice of many roentgenologists to radiate the long bones as well as the spleen in cases of myelogenous leukæmia. In the writer's experience, however, it has not been necessary or, indeed, seemed advisable, when radium is used as the therapeutic agent, to radiate the long bones. Surface applications of radium over the enlarged spleen in the manner above described produce most remarkable improvement, with striking changes in the size of the spleen, the blood picture, and the general condition of the patient. In the course of a few weeks, or in certain instances in three or four months, after radium treatment by surface application a spleen which filled almost the entire abdomen and extended well to the right of the median line and into the pelvis and caused marked pressure symptoms has been reduced to normal dimensions so that it was not palpable below the costal margin. The white cells in the blood were reduced from 500,000 to 6,000, the immature forms being especially affected. The hæmoglobin increased from 60 or less to 90 per cent. Red blood-corpuscles may increase from 2,000,000 to 5,000,000. The abnormal blood cells, myeloblasts, and myelocytes disappear. Indeed, the blood picture returns almost to normal, although some variation in the size of the red cells may persist and there may be relative lymphocytosis. A pale, emaciated, anxious individual with

prominent bony framework, stooping shoulders, and enormously enlarged abdomen usually loses the anxious expression, becomes plump, the abdomen returns to normal size, and the color and strength improve so that the patient may feel entirely well. The pathological condition, however, sooner or later, is apt to relapse, and response is less prompt in subsequent series of radium treatments. Some of the patients treated with radium have been followed for a number of years and kept in good condition by the occasional repeating of radium treatments. Certain cases, however, similarly treated have died of intercurrent infection or have succumbed to the original disease.

Conclusions.—(1) Surface applications of radium in leukæmia produce striking, indeed remarkable, improvement in (*a*) the blood picture, which becomes almost normal; (*b*) in the size of the spleen and glands, which are reduced almost to normal; (*c*) in the general condition of the patient, who from an emaciated and weak condition may become plump and strong. (2) The duration of remission is variable: It may last from months to years. (3) The results of radium treatment are not regarded as curative. It is believed to be, however, the safest as well as the most prompt palliative measure in cases of chronic leukæmia, whether refractory or not, to benzol or X-ray treatment. From the results of radium therapy in leukæmia it is believed to be the best form of treatment now at our disposal.—*The Therapeutic Gazette.*

WOMEN WAR-WORKERS AND THE SEXUAL ELEMENT

By James Burnet, M.A., M.D., Ch.B., M.R.C.P.
Lecturer on Materia Medica and Pharmacy, Edinburgh.

It must be distinctly stated at the outset that my remarks are not to be taken to apply to all women war-workers. A great proportion must, I take it, be exceptions; but the facts I am about to refer to are such as to make it most essential that they should be known and recognized by those concerned.

This war has undoubtedly brought women into prominence in spheres of activity which previously would have been absolutely impossible, such as engineering, iron-moulding, and in such occupations as omnibus conductors, railway servants, post

office workers, and so on. Then there is the large group of amateur nurses. Now, I think it must be conceded that woman, rightly constituted, is naturally drawn towards man. There has been, and always will be, that sexual attraction which is only a common and universal law of Nature. That the object many of these war-workers have in undertaking such work as they are now engaged in has a sexual basis must be recognized. I grant that many of these women are unaware of the fact, but a fact it remains nevertheless. There is undoubtedly a certain glamor, if nothing more, in the wearing of male attire; and these women war-workers seem to thoroughly enjoy what to them is obviously a source of genuine satisfaction. The natural tendency of the healthy woman is to seek out man; and what a golden opportunity is opened out to the amateur nurse in this direction. She is brought readily in contact with officers and soldiers at a time when the latter have leisure, and who find in the attentions of their nurses a pleasant relaxation from the grim terrors of the battlefield. It will be at once said that this statement casts a cruel slur on these self-sacrificing women. If the cap fits, let it be worn; if not, cast it aside. This is my reply to such an objection.

In all this to which I have referred there is a graver danger than most people seem to realize. The war has certainly slackened our moral tone, and what I may term a high-class form of prostitution is much more common in these days than in pre-war times. This free intercourse of the sexes has not had altogether a beneficial effect on the morality of the country. And yet this fact is only realized by a few. Take, too, the subject of female dress. Skirts are worn shorter than ever before. In fact, some women (not necessarily war-workers) seem to vie with each other as to who can wear the fewest clothes. Cigarette-smoking (probably harmless in itself) and drinking are absolutely common amongst women. In fact, it is quite a usual sight to see women smoking and drinking at table in public. The streets in the evenings and the public gardens in daytime afford sufficient evidence of the female cigarette habit. I am no namby-pamby parson, but I see in all this marked signs of deterioration. And underlying it all is the strong element of sex. This is the root of the evil which is rapidly threatening to lower the formerly high moral tone of our women-kind. In short, I see two net results of the war in this connection. The one is a greatly lowered standard of morality,

and the other a great increase in the amount of venereal disease, with all its attendant results.

Unfortunately, questions of this kind are too often left to be handled by laymen, or, worse still, by clerics and grandmotherly or hysterical women. Better for the country if the medical profession would dare to speak out and take the whole matter in hand. There are signs that a change must come in this respect. There is now more freedom of speech allowed on such subjects, and the medical man may now write about these all-important questions without being taken to task as pandering to the tastes of the sordid mind. Too long these matters have been kept secret and known only to a few. The fruits of such foolish secrecy are being gathered to-day in a rich harvest of immorality.

I have only hinted at certain evils. I must leave others more competent to follow me on the lines I have suggested. What I wish specially to emphasize is the fact that the sexual element forms the basis of the whole of these great problems. The woman war-worker in male attire is a subject deserving the very careful and close attention of the medical profession; so, too, is the amateur war-nurse. I feel certain that the careful study of these women war-workers will reveal much that the average student of sex problems has scarcely dreamt of, much less, perhaps, seriously considered. In conclusion, lest my remarks may by some be misinterpreted, I will again state that they must not be taken as applying to all women war-workers. There are, we are only too pleased to admit, many exceptions.—*The Medical Press and Circular.*

"Miss Sweetthing has done a great deal to encourage enlistments."

"In what way?"

"Why she has promised to marry 15 or 20 of her young friends provided they would distinguish themselves on the field of glory."—*Richmond Times-Dispatch.*

Selections

Epidermolysis Bullosa

Taking as his text a case already reported by Nelson, whose history he quotes in full, A. Ravogli, Cincinnati (*Journal A. M. A.*, July 28th, 1917), gives a rather thorough review of epidermolysis bullosa, comparing the case with the reports of other authors and commenting on the same. The points of interest mentioned in the case reported are the formation of bullæ which began to appear a few days after birth on any part exposed to traumatism or irritation, marked infiltration and discoloration after the lesions had subsided, the bullæ showing some tendency to a concentrical disposition, and the total absence of the nails. He discusses the causation at length and also its known pathology. His opinion is that the cause of the disease will be found in some disturbed condition of the vasomotor nerves, either from a somatic disorder in the meninges or in the connective tissues surrounding the vasomotor ganglia, and causing such irritability to react on the skin to each slight trauma. The irritability may originate in some blood poison from a disordered admixture of the internal secretions. Syphilis has been mentioned very little in this connection, but in these cases associated with dystrophies Ravolgi cannot get rid of the idea that in these sufferers a syphilitic hereditary taint can be traced to either the parents or grandparents. In many cases the hereditary bullous syphilid appears a few days after birth on the feet and soles, and pemphigus neonatorum is nothing more than a syphilitic manifestation. In their patient there were stigmata indicative of a syphilitic taint in spite of a negative Wassermann test. In the common type of of epidermolysis bullosa it will be seen that after many relapses the patients recover. The disease must be separated entirely from pemphigus, which may be defined as a bullous eruption produced by poisoning of the system from failure of the kidneys to remove toxin. Excepting as etiologic factors the heredity in some cases, vulnerability of the skin and vasomotor instability, he has given in several cases small doses of calomel and has been gratified by satisfactory results. The patient described in the paper was treated with small doses of calomel and an iron tonic but he did not tolerate the calomel which caused stomatitis. They were

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Any article taken habitually into the body as food or drink, which artificially stimulates any of the organs to over-exertion, cannot avoid leaving a more or less ***cumulative effect*** upon the organs so stimulated.

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In such anomalous conditions it is well to look carefully into the coffee-drinking habits of patients; and a simple diagnostic help and remedial measure may be found by insisting on a change from coffee to

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compelled to discontinue its use. Then injections of neosalvarsan, 0.3 g.m. each in oil, were administered in the gluteal muscle once a week. Improvement began after the first injection, and after the fourth the patient was vastly improved and was discharged as well. Nothing further has been heard from him. The best remedies are mercurials and arsenicals, judging from the therapeutic results.

Unnecessary Operations

After remarking on the progress of surgery and stating his belief in the competency of most operating surgeons, A. D. Bevan, Chicago (*Journal A. M. A.*, July 28th, 1917), says the great increase in surgical operations has brought with it the new problem of unnecessary operations and incompetency of the operator in many cases. Those who are actively in touch with surgical therapy, who see a large number of surgical cases and who come in contact with a large number of men doing surgical work, cannot but be impressed that there is a certain considerable number of operations being performed that are needless and unwarranted and that there is a considerable number of men operating without being qualified to do the work. His impression is that the condition is due to three causes, ignorance, dishonesty, and bad judgment. A surgeon is legally a contractor with the patient, agreeing to give the patient the benefit of a knowledge possessed by the professors of the knowledge and art of surgery in the place and at the time the services are rendered, and agreeing also to give the patient the benefit of his best judgment and due diligence and the benefit of established and accepted methods of practice. As regards honesty the golden rule is a good one to follow. The surgeon should not operate on a patient for conditions for which he would not be operated on himself. As far as good judgment on the one hand and surgical tangents and obsessions on the other, it is necessary to remember that the practice of surgery should be the practice of common sense. The three absolutely essential characteristics of the safe surgeon are honesty, good judgment and scientific training. He asks what shall be done about the operations that are done apparently without regard to these essentials, and the answer, he thinks, would be to handle in a general way that problem of surgical therapy as the American Medical Association has handled and is handling the problem

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of medical therapy, that is, by a committee or council on surgical therapy, whose business it will be to analyze and report on these problems from time to time. There are at least two large problems involved: (1) That of unnecessary and unwarranted operations, and (2) That of operations done by incompetent men. Surgical problems should be attacked as are pieces of clinical research, not from a single point of view or by a single man. The problem of operations done by incompetent men is largely an educational one, and also in a sense a moral question, and he believes it should be taken up as such by the American Medical Association.

Experimental and Clinical Studies of the Toxicity of Dioxydiamido-Arsenobenzol Dichlorhydrate

Jay Frank Schamberg, John A. Kolmer and George W. Raiziss, *J. Cutan. Dis. incl. Syph.*, 1917. As a result of prolonged experiments on rabbits, rats and white mice, with salvarsan and its congeners, the authors draw the following conclusions:

(1) Salvarsan may be used in concentrated solutions, in animals, 0.6 grms. in 10 c.c., without evident increase in toxicity. However, they do not advise this in man.

(2) Failure to neutralize with alkali leads to an increase in toxicity of 50 to 60 per cent. in solution of one-half to one per cent. concentration.

(3) The addition of a moderate excess of alkali does not increase the toxicity. It may have other untoward effects however.

(4) The use of sterile, fresh distilled water appears to possess advantage over sterile, stale distilled or undistilled water as regards toxicity; though in their experiments the difference was not pronounced.

(5) Salvarsan in alkaline solution tends to undergo oxidation on standing, with consequent increased toxicity, but this substance varies greatly in rapidity of oxidation and in degree of associated toxicity. The drug should be used reasonably promptly after preparation. If two to three hours' delay is unavoidable the solution should be kept in a cylinder, full to the stopple so that no air is present.

(6) Several different types of reactive phenomena may occur after the use of salvarsan—(*a*) immediate, (*b*) early, and

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(*c*) delayed. The immediate symptoms are due to a paresis of the blood vessels; the early symptoms coming on a few hours after the injection are febrile and gastro-intestinal, and the delayed symptoms may be referable to the brain or the liver and gastrointestinal tract.

(7) There is no one cause of reaction. The etiologic factors in the production of reactive phenomena may be related to (*a*) the patient, (*b*) the technique, (*c*) the medicament. The authors believe the most important factor in the causation of reaction is referable to the drug. They think the immediate vaso-paretic symptoms are due to traces of an unidentified impurity in the drug, which they term *substance X*. They do not believe these to be due to arsenoxide as is maintained by many workers.

(8) Salvarsan and its congeners are not compound of absolute chemical purity, therefore one must expect variations in its toxicity and biological effects.

(9) Salvarsan is a safer substance than mercury and can be tolerated intravenously by white rats in fifty times the dose of the latter, weight for weight.—*Cleveland Medical Journal.*

The First Dressings for War Wounds

Since on the first dressing applied to a wound depends so largely its subsequent course and the fate of the human unfortunate enough to have been injured, it seems strange that neither war nor accumulated experience has yet enabled a group of intelligent men to unanimously agree upon any one particular form of first aid. The wounds acquired in industrial establishments, often not largely infected, usually wide open, and treated by skilled surgeons almost immediately, may very properly have applied to them as an immediate protector against further contamination dry sterile gauze secured in place by a bandage. To war wounds inflicted by bombs and bursting shells, always devitalized, often tremendous in extent, and practically always and deeply and virulently infected, the application of dry sterile gauze firmly secured in place by a bandage might be admissible were it promptly removed, the wound cleansed of foreign bodies, made accessible in its deepest parts to antiseptic washes, and subsequently either continuously laved by an antiseptic solution, at the present writing preferably the Dakin, or adequately and completely drained. Dry sterile gauze placed on such a wound and retained for hours, perhaps days, is cer-

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tainly in many cases not only futile, but absolutely harmful, acting as a plug to retain infection under pressure and becoming a contributing factor to subsequent complications such as gangrene, hæmorrhage, and general septicæmia.

The underlying principle of all first dressings, certainly in military surgery, is to the effect that each soldier should have one, should part with it to no other, and should immediately apply it to himself or have this done by a comrade. The first dressings supplied to the troops vary. There is surely a best, and probably this best is not to be found at any front. As a part of the medico-military preparation for the part which our own men shall take in settling this conflict, the study of the best first dressing is of vital importance. It must obviously fulfil certain conditions.

1. It must not seal against drainage.

2. It must be protective against further contamination either by contact or through the medium of insects.

3. It should be strongly antiseptic, but neither toxic nor devitalizing to lesions.

4. It must occupy comparatively small space in the soldier's outfit, must be so secured to his accoutrements and sealed that it can neither be lost nor used for purposes other than those intended. It must be sealed against dirt or the loss of its antiseptic powers.

The form of this package and its constituent parts should be determined promptly by an intensive study utilizing for this purpose the material afforded by the great industrial plants and the skilled surgeons in charge of them, and the large accident clinics in our great hospitals. When the apparently ideal first dressing is determined upon, it should be used by troops now fighting in the front.

Various trials and comparisons made with iodine, with sterile gauze and carbolic acid have proven nothing; this possibly because the fundamental principle of drainage, or at least freedom from tension, has not been observed in the trials of these first-aid packages. There are certain new and powerful antiseptics, some of which are neither destructive to living tissues nor materially interfere with phagocytosis. Among them may be named Dakin's latest preparation dissolved in eucalyptus oil, and properly weakened by paraffin oil; Schamberg's mercurophen, non-toxic, comparatively unirritating, and experimentally far more potent than bichloride; and flavine. Nor is the soap dressing without its warm advocates.

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If each man in the American army can carry with him a first-aid package, which instead of complicating the further course of his wound makes its healing more prompt and assured, he will have given an example of medical efficiency greatly to the credit of our profession.—*The Therapeutic Gazette.*

A Conception of Neurasthenia

The term neurasthenia is employed to cover so wide a field that not a few physicians are even yet very sceptical regarding its existence as a morbid entity. Specialists have ascribed its causation to those affections in which they are chiefly interested. Some ophthalmologists affirm that neurasthenia is due in the majority of cases to eyestrain; the Arbuthnot-Lanes and those who trace all the ills of human flesh to deviations from the normal in the mechanism of the intestines, preach the gospel that it is owing to intestinal stasis; many nose and throat specialists look upon a deviated septum, bringing about deficient oxygenation of the blood, as responsible for the train of neurasthenic symptoms. Leonard Williams in the *Practitioner* for July, 1917, joins the chorus and gives his views with regard to its causation. As befits one, who is peculiarly sensitive to the wiles of the endocrine glands, he declares his belief that when these glands become inactive, the subjective symptoms of neurasthenia become vocative and even vociferous. Moreover, he holds that neurasthenia being a circulatory matter, should not provide cases for the neurologist but rather for the cardiologist or surgeon. As for treatment, the remedy lies in the purification and the correct composition of the blood supply. The purification refers to drainage and the good composition to the tribute of the endocrine glands. In short, Williams insists upon the practical identity of the symptomology of true neurasthenia with that of suprarenal insufficiency.—*Medical Record.*

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Miscellaneous

Typhoid Fever

Attention is directed to a timely announcement which appears elsewhere in this journal over the signature of Parke, Davis & Co., and bears the caption "Typhoid Fever." Prophylaxis, diagnosis and treatment, in logical sequence, are briefly and comprehensively considered in this advertisement.

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The first two or three months of the year are usually characterized, in the experience of the family physician, by the occurrence in his practice, of a crop of cases of the contagious diseases of children, especially scarlet fever, measles, German measles, etc. This is accounted for by the readiness with which contagion is spread in the schools, when ventilation of the school room is the least perfect and the closer housing of school children during school hours favors the distribution of com-

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municable diseases. As the diseases in question are self-limited in nature, expectant and symptomatic treatment, together with precautions as to isolation, etc., is about all the physician is called upon to direct. It is well known, however, that in all but the mildest cases, the adolescent subject of scarlatina, or measles, is usually more or less debilitated or devitalized, when convalescence is established. Special care should be taken to avoid the administration of any tonic or reconstituent which is likely to disturb the child's digestion or, by inducing constipation, to minimize the appetite or desire for food.

Pepto-Mangan (Gude) is the ideal reconstructive tonic for these young patients, because it is pleasant to the taste, easily tolerable by the stomach and readily assimilable by blood and tissue and promptly efficient in restoring appetite, strength, color and general well-being.

Lupus Pernio, Cutaneous Sarcoids, and Tuberculosis

Schaumann, of Stockholm, writes at length on this subject, and publishes a series of cases, one of which is as follows: Female peasant, 41, good heredity. At the age of 23 a small red nodule appeared on the right cheek and slowly enlarged. Five years later some of the fingers and toes became swollen. Four years before consultation she had an attack of erythema nodosum. At consultation the lower portion of the nose was seen to be the seat of lupus nodules. In the right cheek there was scarring with similar lesions. Most of the fingers were now markedly swollen. The lesions of the face yielded to phototherapy. Seen three years later, patient was pale, thin and weak. The skin was normal. Ligaments of fingers and toes were relaxed with resulting deformity. A radiograph showed demineralisation of the bones. There was a slight general adenopathy. Evidence of slight pulmonary tuberculosis was conflicting. As a result of elaborate histological studies the author arrives at the following results: There is a tuberculoid affection, a tuberculous lymphadenia, characterized by lesions of the lymph nodes, tonsils, bone marrow, lungs, liver and spleen. As in similar conditions, skin lesions co-exist. One type of these agrees histologically with the before mentioned lesions (sarcoids, lupus pernio). The other type, nonspecific, comprises erythema nodosum, prurigo, etc.—*Medical Record.*

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The Canadian Practitioner and Review

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Original Communications

PAST AND PRESENT IN SURGERY—ADDRESS*

By Francis J. Shepherd, M.D., LL.D., F.R.C.S.

When asked to deliver the address in surgery to the Canadian Medical Association, my first impulse was to refuse, for I had for some three years given up surgical practice and felt the task ought to be undertaken by some younger man in active work who was more *au courant* with the surgical problems of the day. However, I was overruled, and not wishing at this time of great patriotic endeavor to relegate the office to outsiders, I consented to do my best and address you to-day.

It has always been my opinion that our Canadian national societies should, at their annual meetings, take stock of the knowledge acquired in the special departments of science they represent, so that the papers read should be an index of the progress of that science the society is interested in. Now this applies to Medicine as well as to other departments of science and I contend that our meetings should not be made use of for strangers to display their knowledge and cleverness, and often to play to the gallery, but that we should rely on our own members for papers and contributions and so be an index of our own vitality. We are passing out of the colonial and dependent stage and are becoming one of the sister nations of the great empire of Great and Greater Britain.

In 1874-5, when I was in Vienna and filling up my papers for the *Politzei,* I wrote in "Dominion of Canada" as the country I hailed from, but so little was the country known at that time that my papers were returned with the query: "Was it not the Island of Candia I meant?" I said, "No, it was

*Delivered before the Canadian Medical Association, June 15th, 1917.

Canada," and it took three months before an investigation satisfied the authorities that there was such a country as Canada and I was given leave to reside in Vienna. Again, when in London as a student, placards were posted on the church doors by order of the Privy Council, stating that information had been received from Ontario, the *Capital of Canada,* that the potato bug had arrived and warning the people of England against its introduction into that country.

Now in the fiftieth year of the formation of our nation how different is the picture! Since the war began the name "Canadian" has quite a distinctive significance apart from "American." How often have Canadians and Americans been synonymous terms, even with our fellow subjects in Great Britain. But now since the deeds of our soldiers have been so illustrious on the battlefields of Flanders and France, all the world knows the "Canadians" and never again will we be confused with our neighbors across the line. Not only have the Canadian soldiers given us a distinctive place in the eyes of the world, but our Canadian hospitals and ambulances and Canadian surgeons and physicians in France by their splendid work have also written their names on the tablets of history and have become a separate entity. We are not now classified as Americans, but as Canadians. This is a very great advantage to all of us and will in future make us more self-reliant and make us believe more in ourselves and tend to form a school of medicine of which we can all be proud, and teach us to draw less heavily on the knowledge furnished by others, not Canadians. Now in this connection, why should we not have our Royal Colleges of Surgeons and Physicians affiliated with those of Great Britain which we respect and reverence so much. Why should we be dependent on the Americans for our titles as surgeons or physicians? Why should not we have F.R.C.S.&.P. of Canada after our names? Some years ago this Association nominated a committee to look into this matter, but like so many other committees it has never reported.

My view of surgery extends back for many years, to pre-antiseptic days, and I esteem it a great privilege that I saw the birth, growth, and triumph of the principles of antiseptic surgery. It has been a wonderful experience and no one who has not lived through this period can fully appreciate the vast changes and advantages it introduced to the great benefit of all mankind. The only analagous epoch-making discovery was that

of anæsthesia. Pre-anæsthetic and anæsthetic times were comparable somewhat to pre-antiseptic and antiseptic times. In my student days the older surgeons were all of the pre-anæsthetic period and one was amazed at their dexterity and celerity in operating, for time was an object when they learned to operate. Of course the range of operations was limited to amputations, lithotomy (lateral), the removal of external tumors, the ligature of arteries, and occasionally the trephining of depressed fractures of the skull. Not only were these men most skilful and rapid operators, but they were first-class practical anatomists and were never uncertain in the use of the knife: the timid and ignorant operator was eliminated by the conditions which then existed.

How different is the surgery of to-day; no cavity is free from the successful intrusion of the surgeon and many purely medical regions have been transferred to him entirely. What rapid strides surgery has made and how difficult it is for the ordinary man to keep abreast of its rapid progress! No one can now, as formerly, be efficient in the whole range of surgery, so there are many sub-divisions and specialties. This does not always make for the broadening of the surgeon but it makes him perhaps more efficient in special lines. I see a large book has been published lately on the diseases of the umbilicus.

The advent of the X-rays was another most important and epoch-making discovery, and how useful it has been in the present war!

This war has brought antiseptic as contrasted with aseptic surgery to its own again, and how much more efficient has the army medical service been as compared with previous wars, even though in this great Armageddon high explosive shells, liquid fire, and poisonous gas are used! How complete the arrangements for removing the wounded, getting them rapidly to operating centres, etc., etc. I have of late seen several cases of multiple wounds of the intestines from shrapnel returned to the military convalescent hospitals here in good health and able to do ordinary work. It is remarkable what comparatively good results have been obtained in the field of abdominal surgery. For a good many years it has been the custom of surgeons in civil hospitals to operate without delay in penetrating wounds of the abdomen, but until the present war gunshot wounds of the abdomen received in the field of battle were treated expectantly; now army surgeons are advocating, where possible, immediate operation. Dr. Abadie has published a book on this

subject called "Les Blessures de l'Abdomen," and has collected 713 cases treated by expectant treatment with 77 per cent. of a mortality, and 688 cases treated by operation with a mortality of 64 per cent. He advocates early laparotomy in penetrating wounds of the abdomen and that operating facilities should be as close to the trenches as possible, suggesting operating rooms on wheels which can be moved easily. He prefers chloroform as an anæsthetic and for four or five days that nothing be given by the mouth, but that four or five litres of fluid should be passed daily into the bowels by the drop method. He also advises that the patient should be kept under the influence of morphia.

In the March 10th number of the *British Medical Journal* there is a series of articles by army surgeons on penetrating wounds of the abdomen which is well worth reading, and from the satisfactory results obtained in apparently desperate cases, they deserve to be congratulated for their good work. In stomach wounds without other injuries, more than half recover if early operation is possible. In cases of uncomplicated wounds of the small intestines, seen early, the recoveries are often 100 per cent.; in other wounds of the intestines, suitable for operation, 30 per cent. recovered. These statistics agree with Major Archibald's experience as described in an article in a recent number of the *Journal of the Canadian Medical Association*. Wounds of the large intestine are more fatal owing to the greater risk of infection. On the whole, however, the chances of recovery after wounds of the abdominal hollow viscera are better than in cases of compound fracture of the thigh.

This is certainly a most encouraging report and means a great advance in the treatment of gunshot wounds of the abdomen. I have seen several cases of multiple gunshot wounds of the intestines as I said before, returned here to our military convalescent hospitals, which have been operated on successfully close to the front, and this is a great step forward, and although not so life-saving as the prevention of typhoid, yet shows the wonderful progress of battlefield surgery.

A method of disinfecting wounds has been devised by Carrel in which Dakin's solution, the hypochlorite of sodium, is used. The object of Carrel's method of disinfection is, of course, to render a wound sterile so that the antiseptic used comes in contact with every part of the wound, and "that the antiseptic is maintained in suitable concentration throughout the entire wound and that this constant strength is maintained for a prolonged period. If these conditions are fulfilled every wound

will show its response to the treatment by the diminution and disappearance of its micro-organisms (Lyle). The wound should first be thoroughly disinfected and all shell fragments, clothing, dirt, etc., removed before the apparatus devised by Carrel is used, so as to keep up a continuous application of the antiseptic. In the wounds treated by this method there is no redness, tenderness or induration at the edges; they heal rapidly, and on schedule time—for flesh wounds fourteen days, compound fractures twenty-eight to thirty days. The necessity of amputation for infection is abolished and suppuration disappears. Many patients have quite supple scars and the gravity of severe mutilations is so much reduced that men are returned to the front who otherwise would be crippled for life.

So you see antiseptics are coming into their own again, although the old antiseptics have not proved entirely satisfactory in septic wounds produced in this present war; for there is so much destruction of tissue and such deep infection that ordinary antiseptics do not seem to be sufficient. Of course free incision and the removal of foreign bodies are of great help, but some chemical is needed to cleanse the wounds and destroy germs. Most antiseptics, such as phenol, alcohol, Dakin's solution, hydrogen peroxide, iodine, etc., etc., while killing the bacteria destroy the cells and so prepare a nidus for flesh infection. Browning and his co-workers, Gulbransen, Kennaway and Thornton,* of the Bland-Sutton Institute, have shown that bactericidal substances must have a great potency against all organisms in the presence of proteid materials such as serum; it must be stimulating to granulations; it should have no deleterious effect upon phagocytosis, no irritant action on delicate tissues, such as mucous membranes, and no toxic effect on the most highly specialized cells. They found that in all known antiseptics the bactericidal potency in watery solutions is diminished when the medium is wholly or partially serum. They also found that a number of acridine dyes have an enhanced bactericidal power in the presence of serum; the compound diamino-methylacridinium chloride, which the authors calls "flavine," is the best; twenty times more powerful than corrosive sublimate, and eight hundred more so than carbolic acid or chloramine under the same conditions. The tryphenylmethane compounds, especially brilliant green and crystal violet, are very active as regards cocci, but towards B. coli their bactericidal value is con-

*British Medical Journal, January 20th, 1917.

siderably lower than flavine. Flavine is much less detrimental to the process of phagocytosis and less harmful to the tissues than other substances, hence a much higher concentration can be employed without harming the tissues or interfering with the natural defensive mechanism, and it is more rapid in its action.

Brilliant green comes next in efficiency in these respects. No doubt many other antiseptics will be evolved before this war is over, of more value than those we have placed such reliance on in the past, and often used blindly without knowing how well or efficiently they acted. However, the last word has not yet been said on antiseptics.

These are not the only problems the war is helping us to solve: there are many others, such as, how to cope with the terrible gas gangrene which is at times so prevalent; the cause of shock, which has puzzled us for so many years, and about which there is such a diversity of opinion as to its nature and prevention. In war surgery what is most dreaded is shock, for until it is overcome the surgeon cannot successfully operate. H. H. Dale and P. P. Laidlaw, of the British Medical Research Committee, have lately been investigating this subject.* By injecting a poison called histamine profound shock is produced, profound fall in blood pressure and a loss of about one half the plasma of the blood in five minutes. This is due to the passage into the tissues and lymph spaces of all the constituents of blood plasma—in fact a large part of the blood disappears, the veins are empty and the capillaries have lost their tone; although the heart beats fairly strongly there is no pulsation in the arteries. Many causes produce like effects, such as the toxæmia from gas gangrene, bacillary dysentery; there the fluid is lost by excretion. Similarly shock is produced by intestinal obstruction, post-operative shock, without hæmorrhage, extensive burns, etc. As to treatment—prevention is advocated. Hæmorrhage predisposes to shock, also fatigue, exposure and starvation. It is also suggested that free saline purgation before operation and abstinence from food and water may also predispose. Free supply of fluid by infusion of saline into the rectum or subcutaneous tissues must be undertaken before operation. The only drug of any use is pituitary extract, for it causes a prolonged and general contraction of the arterioles and so diminishes the total capacity of the circulatory system with the effect that deficient blood pressure is diminished.

*British Medical Journal, March 24th, 1917.

Adrenalin, the effect of which is very transitory, is objected to and intravenous injection of hypertonic saline is advocated, as used in cholera. The paper, of which I have given such a short summary, is well worth reading and brings us another step forward in solving the problem of the nature and prevention of shock.

All praise for the great work the surgeons and physicians are doing at the front, and behind it! How self-sacrificing has been their work, and how many we know have given up their lives for the cause in the performance of their duty behind the firing line, attending the wounded and helping them at the risk of their own lives! Rewards are given to those who successfully escape the dreadful slaughter, but after all the best are often taken and where are their rewards? Merely in the memory of those they have left behind.

What good work the physicians have done in preventing typhoid, tetanus, etc.! The sanitary arrangements of all areas occupied by the British are almost perfect and the cleansing and drainage of villages occupied by them is wonderful to see.

On this side of the water we also have to do war work and those wounded and invalided soldiers who are weekly being sent over to us give us cause for much thought. Not only have large hospitals to be provided for them, but we have to act as foster-fathers to those soldiers who have become more or less incapacitated, and to endeavor by treatment to restore them as far as possible to normal conditions, and to re-educate them so that they may earn a living and not be a burden to the community. This the Military Hospitals Commission is doing as far as its opportunities and equipment enables it to do. Vocational training and re-education will go on for some time after the war, so that Canada will for some years be reminded of the great struggle by the presence among us of many of its victims.

Many strange things happen in this vocational training and re-education; many have discovered that they have tendencies and predilections and ability for certain forms of work which were hitherto unknown to them. In one case, a poorly educated French-Canadian, who had been a plasterer, lost a leg and whilst attending the educational classes developed a wonderful talent for drafting, and he is now employed in a large establishment as a draftsman at a very respectable salary. Carpenters have been developed, also mechanics, who previously had no notion of their tendency in that direction. Many who

could read and write with difficulty have become proficient, and others in addition have taken to arithmetic and book-keeping. Others, less intelligent, have been satisfied to learn to be time-keepers, etc.

The Military Hospitals Commission have established in Toronto an artificial leg factory where the lightest and best types of leg can be made and fitted; in consequence our legless soldiers are sent to Toronto to be properly fitted with artificial limbs, and whilst there, and waiting, they are given vocational training in any branch of work they have an aptitude for, which work they can continue after their discharge. The government has provided that whilst discharged men are learning a trade their families are provided for until their work becomes remunerative.*

I see that in the early part of this year there was a great controversy in the *British Medical Journal* about the relationship between the surgeon and the physician; that the surgeon was overpaid in his mere mechanical or handicraft work, whilst the physician, who looked down on hand work, for the superior brain power put into his diagnosis and opinion, was very poorly paid. Sir Clifford Allbutt, in an interesting letter, points out that down to the 12th century the physician and surgeon was combined in one person, instancing Hippocrates, the Alexandrians, Galen, and the great school of Bologna. In the next century the division between surgery and internal medicine became complete when the University of Paris excluded from its degree all who worked with their hands; then it was, as Burdon Sanderson said, that "Medicine lost its scientific arm." This example of Paris blighted other universities, such as Oxford, Cambridge, Montpelier, and Toulouse. As the writer of the letter says: "Thus Medicine obliterated herself and dried into the husks which were mocked at by Petrarch, Rabelais and Molière." Even forty or fifty years ago, or later, no surgery or surgical certificates were required for the M.D. degree of Cambridge. It is absurd to separate entirely these two great branches of medicine, and every surgeon ought to be somewhat of a physician and the physician somewhat of a surgeon; or at least know enough to call in a surgeon in time. As a rule surgeons and physicians work harmoniously together and should be like man and wife, each depending somewhat

* In the near future the Commission intend to establish other artificial limb factories in the other great centres, for at present the Toronto establishment cannot keep up with the demand.

on the other and determined to bear and forbear. An old saw says:

> A single doctor like a sculler plies,
> The patient lingers and then slowly dies.
> But two physicians like a pair of oars,
> Shall waft him swiftly to the Stygian shores.

If there had been a surgeon and a physician in this consultation, the result above referred to would probably not have happened.

Now as to the fees of surgeons. Many people think they are sometimes exorbitant and it seems to me that in some cases in the country to the south the surgeon has been out for spoil. Fees as large as $25,000 and more have been charged, basing the charge on the income of the patient. Now, I have always felt that this was commercializing the profession and that no operation was worth such an amount, a fair and reasonable fee up to $1,000 for the rich and a graduation downwards for those less able to pay seems to me fair, and I personally have no regrets in my past career as to excessive charges. I know of cases where the patient, or the husband, has had to sell household goods to pay the surgeon. Such things should not be, and surgeons before long will have, if they have not already acquired it, the reputation of lawyers. A lawyer is described by Lord Brougham as, "A legal gentleman who rescues your estate from your enemies and keeps it for himself." I am well aware that many times the surgeon is underpaid, or not paid at all, but that is no excuse for the use of Robin Hood methods.

The multiplication of medical journals, good, bad, and indifferent, is another feature of development in the last forty years. Formerly nobody wrote unless they had something to say, but now every man is solicited to write and cannot apparently succeed without much advertising. Undigested articles see light, and crude theories are enunciated as truths. Work half done or badly done is reported for fear some one will get ahead of them. The consequence is there is a mass of purely ephemeral literature which does no good to anybody, except perhaps temporarily to the writer. A new remedy is discovered, everybody rushes into print and recites their experiences before the remedy has had time to be tested. Douglas Jerrold said once to a young man who burned to have himself in print: "Be advised by me young man, don't take down the shutters until there is something in the window." How

many are those who have anything to show in the window after the shutters are taken down? "Oh that mine enemy would write a book," said the Psalmist. Now every medical man who is anybody does write a book, and although it may be condemned by a few, if well advertised it is read by the many. I heard a medical publisher say once that he did not care who wrote the book, if he published it he could sell it, not on its merits but on his fulsome and oft-repeated recommendation. The younger the practitioner, as a rule, the more he writes. Encyclopædias and systems are written or compiled by very young men having plenty of time, but as they get older they write less, but what they write is more worth reading, and by experience they learn how little they formerly knew, though posing as authorities. In time they become more critical of their own work and hence produce less. However, this premature work was not without benefit for the training they got and the amount they learned in preparing articles did them much good and prepared them for the riper work they produced later on.

Before closing this rather fragmentary address, I should like to say a few words on a subject about which I wrote many years ago, viz.: Medical and Surgical quackery. A new phase has opened up during the past few years,—the desire on the part of the quacks to be legalized and the wish of many members of the various legislatures to aid them in this object. In Ontario, irregulars, such as osteopaths, chiropractors, etc., are trying to get an Act passed to legalize them and put them on a par with the regular profession and are finding support amongst supposedly educated and cultivated people. A commission, appointed over a year ago, has been investigating their claims and those of the regular profession, with no definite result as yet. That a commission was appointed shows the tendency of the times. It is extraordinary; notwithstanding all our education and supposed higher civilization, how quackery flourishes. In fact it is the upper classes of society who patronize quacks. "Imagination," says Bacon, "is next akin to a miracle working faith," for imaginary diseases are cured by the imagination. Man is a dupable animal; there is scarcely any one who may not, like a trout, be taken with tickling (Southey). The cures are mostly in those cases where no organic change exists, but that they have taught something I won't deny, for in cases of stiff joints with fibrous ankylosis or fibrous adhesions after traumatism, they often do good, but in many cases

when serious lesions exist great harm can be done. I saw one case of ulcer of the stomach which had been rubbed for some time by an osteopath and who at last, becoming alarmed at the condition of the patient, sent him to a surgeon for operation. A perforation of the stomach was found and there was general peritonitis, accelerated, no doubt, by the vigorous treatment of the osteopath. The patient of course died. It is curious how now-a-days (although there have been bone-setters from time immemorial) that the modern quack treats mostly surgical cases; replaces a supposed bone out of place, reduces a dislocated spine, or rubs out a tumor—all more or less surgical. Now, if such men are legalized, as they are in some states of the Union, then there is no further use for carrying on the work of various licensing bodies called colleges of physicians and surgeons. Let us have free trade in medicine, and the best man will always come out on top. There is one notable instance where the bone-setter put the profession in the right way—the reduction of the dislocated hip by manipulation, which was practised for generations by a family living in one of the New England states. They transmitted the secret from father to son, and Dr. H. R. Bigelow, of Boston, hearing this, investigated and found that there was something in it, and by a series of dissections of the hip joint proved that the resistance to reduction was caused by the tension of the ilio-femoral ligament, and when this was relaxed by flexion and the limb rotated, the bone slipped into place. This much we are indebted to the bone-setter who accidentally found out this fact without knowing the reason. They have also taught us that the manipulation of joints after injury is better than enforcement of rigidity, which was advised by the older surgeons.

There seems to be almost in everybody a vein of superstition and credulity against which argument is useless and which education does not seem to eradicate. Perhaps what Oliver Wendell Holmes said about these people is the best advice: "Ephriam is wedded to his idols, let him alone." . Another has said many years ago: "The final, though distant extinction of quackery is to be hoped for, it forms a fragment of the final triumph of reason and virtue which is the secret consolation of every philanthropist."

Editorials

FOOD CONTROL

We have in Canada a food controller who, we fear, has not been able to accomplish much good up to the present time. So far as prices are concerned the general consensus of opinion is that he has accomplished little or nothing. However, this brings us into the arena of politics, where we prefer not to express any decided opinion. But let us suppose that the Government has entirely failed so far as the regulation of prices is concerned, and such supposition would be nearly if not quite right. Let those who wish knock the Government as hard as they like, but there is another feature of the case of very vast importance, which does not appear to be appreciated by the public in Canada. Let us forget for the time being the errors of the past in Canada. Let us take our inspiration to a large extent from the British Food Controller, Lord Rhondda. He tells us that the main thing required is to maintain the supply of the essential foodstuffs, such as wheat, beef, bacon and cheese. Let us forget our politics of the past, including much jockeying for position on both sides, and also let us consider the dangers confronting us. We are told that unless there is a speedy and successful effort on the part of the people living in Great Britain, Canada, United States, France and Italy to economize in the matter of such foods as wheat, beef, bacon and cheese there will be a shortage in these important foods next spring so serious as to cause our brave boys at the front to go hungry.

Will the members of our profession look carefully into this subject and explain the essentials to their patients? There is a great misunderstanding of the whole subject so serious that much evil may follow. Let them ask their patients to forget their politicians, but ever remember the needs of the brave lads that are fighting our battles for us.

MILITARY HOSPITALS COMMISSION

The Military Hospitals Commission has done a vast amount of good work up to the present time, and is likely to do much more in the future, perhaps for years to come. The work accomplished in the way of vocational training is remarkable. We learn from the report published last May that vocational training is being carried on in a large number of hospitals: three in Hamilton, two in Toronto, two in Kingston, two in London, one in Ottawa and one in Whitby; for Ontario. Similar work is being done in four hospitals in Quebec, six or seven in the Maritime Provinces, and in several hospitals in each of the Western Provinces. In these hospitals classes are carried on in motor mechanics, bookkeeping, typewriting, farming, market gardening, etc.

Great attention is being devoted to the provision of artificial limbs. It is not known how many Canadians require them, but it has been estimated that in the British and other expeditionary forces more than twenty-five thousand will be required. As there is a shortage in Great Britain the commission decided to supply the Canadians in Canada. The commission opened a factory in July, 1916. Seven suggestions

are made in the report for the public to think over: (1) Employment must be found for many thousands of men; (2) a large programme of public works may be necessary; (3) a policy of assisted land settlement is recommended; (4) new industries may be necessary; (5) arrangements should be made for the management of immigrants; (6) organizations of the returned soldiers should be assisted; (7) co-operation between Federal and Provincial authorities is essential.

SOCIAL SERVICE WORK

The annual meeting of those interested in Social Service Work and various charities was held in Ottawa, September 25th.

The annual meeting of the Tuberculosis Association was also held in Ottawa, September 26th.

The sixth annual meeting of the Canadian Public Health Association was held in Ottawa, September 27th and 28th. A large number from various parts of Canada were in attendance, a fair proportion of them attending the sessions of the three different Associations. Sir James Grant, Doctor Montizambert and Doctor Bryce as usual were much in evidence, and helped materially to contribute to the success of the different meetings. In order to induce the profession and the public of the city of Ottawa to take a good deal of interest in the important meetings, Doctor Evans, the gifted President of the American Health Association during the past year, was brought from Chicago to deliver an address at an open meeting. Doctor Evans certainly delivered

an admirable and scholarly address to an audience extremely appreciative, but not nearly so large as it should have been. These Associations will hold their meetings for next year in Hamilton, and there is no doubt about the fact that they and other Associations holding their meetings at or near the same time will be well received in that wonderfully hospitable city.

Y.M.C.A.

It was the custom in certain quarters in times past to belittle the work of the Y.M.C.A. Its magnificent record since the commencement of the war has changed all that, however. Among the most active members in Toronto is Major John Brown, an old West End Y.M.C.A. man, who graduated M.D. at Columbia University. He went to France last March and returned to Toronto early in October, and has been appointed Associate General Secretary of the Y.M.C.A. for Canada. He delivered an address in Toronto, October 6th, in which he gave his impressions on three things: (1) the war; (2) the men; (3) the work of the Y.M.C.A.

After describing Vimy Ridge he spoke of the soldier and his loneliness (in a sense) at the battle front. He soon feels the want of other companionship than that of men, and one soon notes his affection for the little ones of the villages, and the hunger of the heart for the finer side of life. It is very sad to know that when these men go to London or Paris to enjoy their ten days' leave they are forced to fight their way through crowds of soliciting women. "It is here that our work begins."

He also referred to the many phases of Y.M.C.A. work in England and France, classes being opened everywhere for educational work. The enthusiasm of the men thus instructed was pronounced, and probably more work would be required in the same direction after the conclusion of the war.

PEEL MEDICAL ASSOCIATION

The fifth annual meeting of the Peel Medical Association was held in the town of Brampton on Thursday, September 27, 1917, and was one of the most successful in the history of the Association.

The success of the meeting was due in a large measure to the valuable paper presented by Dr. H. B. Anderson, Toronto—"Mouth Infections in Relation to Systemic Disease," assisted by Dr. Tovell, illustrating them by case reports, specimens and lantern slides.

Dr. W. E. Gallie, of Toronto, also presented a splendid and up-to-date paper on "Non-Union of Fractures," which was also valued and most highly appreciated by the medical men of Peel County.

The following officers were elected for the ensuing year: President, Dr. T. Bowie, Streetsville; Vice-President, Dr. D. Haggie, Brampton; Sec.-Treasurer, Dr. A. F. Reynar, Palgrave.

News Items

A Substitute for Salvarsan

The following letter from the C.O.H., Ont., to the Editor, dated August 21st, was published in the October issue of *The Canadian Medical Association Journal.*

I note with satisfaction your article in the current number of the *Journal* upon the Venereal Disease problem, particularly that portion in which you deal with the matter of the production of remedies for the cure of syphilis, with free diagnosis and treatment, and with quack practice and advertising of quack remedies.

You will be interested in knowing that the Provincial Board of Health made application last June to the Commissioner of Patents for a license to prepare a substitute for salvarsan, under the German patents. This application was most vigorously, and for the time being, successfully opposed by the Synthetic Drug Company, and Dr. Archambault, of Montreal, the present licensees. Although it was shown to the Commissioner that the facilities of the Board in the way of plant, etc., would obviously reduce the present excessive retail price ($2.50 per 0.6 gramme, which is 100 per cent. above the wholesale price), the application was refused. However, a strong protest is being entered against this decision and the Board relies upon the medical press and profession for support in securing in respect to these remedies, the same successful results which have been attained in regard to the various vaccines and antitoxins now supplied free by the Board and made available at about cost price to the whole of Canada.

The Synthetic Drug Company, while disclaiming that they control the retail price of diarsenol, can scarcely successfully maintain such denial in the face of the fact that, when one seeks to purchase this article he is confronted by the printed card of the company detailing the retail price already referred to.

I might mention, with reference to the Academy resolutions, that the Board has already in operation a strong propaganda of education and that laboratories for the free diagnosis of venereal diseases are now in operation at Kingston, London and Toronto. The question of free treatment will have to wait until we can obtain a cheaper means of treatment.

Legislation should certainly be secured to control quack practice and advertising.

The Board is fully alive to the need of vigorous action in respect to this problem and is prepared to advance as rapidly as public opinion will support it.

Sgd. J. W. S. McCULLOUGH.

Medicated Wines

The Ontario License Board are instituting an active campaign against the "medicated wine" that may be used as a beverage. It appears that the Board in the past have been peculiarly handicapped in prosecuting the manufacturers and vendors of such wines, because they had to proceed under the "Patent Medicines Act." In case of conviction, the maximum penalty was only $50.00, and an appeal generally followed. The result was that the Board made very little progress. It is stated that, according to an amendment recently passed at Ottawa, the Board can now proceed with prosecutions under the Ontario Temperance Act, which carries a maximum penalty of $1,000. It is understood that the Department will proceed especially against the manufacturers and not the druggists.

Woman's Auxiliary of the Army Medical Corps

At the annual meeting of the Woman's Auxiliary of the Army Medical Corps, held October 5th, in the Gage Institute, Toronto, with Mrs. C. A. Warren in the chair. The work of the past year was very satisfactory, particularly as to the Field Ambulance. The officers for the coming year are: President, Mrs. W. H. Jeffs; First Vice-President, Mrs. J. W. S. McCullough; Second Vice-President, Mrs. E. B. Hardie; Secretary, Mrs. Goldwin Howland; Recording Secretary, Miss Yellowlees; Treasurer, Mrs. W. E. Ogden; Convener for Supplies, Mrs. Dobie and Mrs. Godwin. There are now 66 paid-up members, and at present they are busily engaged in making pyjamas and socks and filling Christmas stockings for overseas.

It is reported that as a war measure a limited number of women will be admitted this year to the Harvard Medical School, and also to the Medical Department of Columbia Uuiversity.

It is expected that a hospital for tubercular patients will be erected in Chatham, Ontario.

The Order of Elks in the United States have been asked by their Grand Lodge for a fund of $1,000,000 for Base Hospital units in France.

There is now a serious shortage of rubber gloves in England, and the English manufacturers are unable to supply the gloves required for the army alone.

A new Woman's College Hospital is being erected on Rusholme Road, Toronto. The corner stone was laid by Lady Eaton, September 19th.

They are organizing the Medical Service rapidly in the United States. It was supposed, September 1st, that there were nearly 14,000 medical officers in the army.

The eighth annual session of the Clinical Congress of Surgeons of North America was held in Chicago during the week of October 22nd. We are told that it was very successful in every way.

We are told that a new kind of poisonous gas is being used by the Germans. It possesses properties like those of the lacrymatory gas which has been used for some time. Because of its irritating qualities, and its smell, it has received the name of "mustard gas."

The British authorities have confirmed the report that in the future every British hospital ship shall carry a neutral commissioner appointed by the Spanish government. This has been done because Germany has agreed to give safe conduct to hospital ships, provided a Spanish naval officer is on board to guarantee that the vessel is used for the transport of the sick and wounded.

The Woman's Auxiliary of the Canadian Army Dental Corps held a very interesting meeting in the Y.M.C.A. Building, Toronto, October 4th, the President, Mrs. A. E. Webster, being in the chair.

The death rate from automobile accidents has greatly increased in the United States since 1911. Then the rate was 2.3 per 100,000. In 1916 it was 7.4. About 30 per cent. of those killed were under ten years of age.

Chemists have been investigating the qualities of raw and cooked eggs; raw egg-white is said to be difficult of digestion because it contains something, which has a retarding or inhibiting action on the digestive enzymes, which is destroyed by heat.

The Field Ambulance Service, carried on by Americans for the French army, has been taken over by the Medical Department of the United States Army. Each ambulance unit consists of a Lieutenant and 45 men. Twenty units thus organized have already gone to France and are probably now at the French front.

We are told that a notable feature of the important drive by the British, October 4th, was the wonderful completeness of the arrangements for rapidly clearing the wounded. Despite the inclement weather, the stretcher-bearing was practically finished early in the afternoon so far as the open field was concerned.

Hon. Dr. Roche has retired from the Dominion Cabinet, and has become Chairman of the Civil Service Commission. Dr. Roche was born at Clandeboye, Ont., and was educated at the Western University, being the first to graduate in Medicine from that institution. While in practice in Manitoba, he was a member of the Medical Council of that Province from 1885 to 1901. He was generally recognized, in the House of Commons, as one of the few men who never spoke excepting when he had something to say.

Personals

Dr. A. B. Atherton has removed from Fredericton, N.B., to San Diego, Cal.

Dr. John Malloch is now in the Ontario Military Hospital at Orpington, England.

Dr. Lachapelle, Montreal, has been appointed President of the Dominion Medical Council.

Capt. A. S. Moorhead, C.A.M.C., is now at work in France under Col. Bruce, M.D.

Col. Murray McLaren has been appointed Deputy Director of Medical Services.

Dr. W. J. Clark, 867 College Street, Toronto, returned to his home October 5th, after 19 months overseas.

Major Frank Walker, M.B. (Tor. '13), was awarded the Military Cross for gallantry on the field.

Drs. W. L. Denny, London, Ont., and D. A. McKillop, St. Thomas, have been appointed medical officers in the Royal Navy.

The following doctors have gone to China: Captains L. J. Siebert and J. D. Livingstone; Lieuts. J. A. MacDonald and P. E. Ford.

Capt. H. A. Simkins was for some time in the Spadina Convalescent Hospital, Toronto, and has been transferred to England.

Dr. Walter Wright (Capt.), of Toronto, is living for the winter in Hindhead, England, and is attached to the Bramshott Military Hospital.

Dr. J. Gordon Gallie has resumed his practice at 143 College Street, Toronto, and will restrict his attention to Obstetrics and Gynæcology.

Dr. Robert Saundby, of Birmingham, England, delivered the Harveian oration before the R.C. of P., London, October 18th.

Dr. M. B. Whyte, Superintendent of the Isolation Hospital, has been appointed Director of Medical Services in the Medical Inspection of Public and Separate Schools, Toronto.

The following officers of the C.A.M.C. have been reported wounded: Lt.-Col. A. S. Donaldson, and Capts. J. E. Bloomer, J. H. Jones, R. W. Kenny, R. D. Mackenzie, and J. Moore.

Lt.-Col. E. B. Hardie, O.C., Toronto Base Hospital (Old General Hospital), was elected President of the Toronto Branch of the War Veterans' Association.

Dr. A. W. McPherson (Major), M.O.H., Peterborough, Ont., after an absence of more than two years overseas, returned to Canada in September on a two months leave of absence.

Dr. T. B. Richardson, of Toronto (Lieut.-Col.), has been appointed a member of the Pension Board in Ottawa, which probably means that he will become a permanent resident in that city.

Dr. Byers (Capt.), Ste. Agathe, Que.; Dr. Parfitt, Gravenhurst, and Dr. J. H. Elliott, of Toronto, have been appointed an Advisory Committee on Tuberculosis to assist the Canadian Hospitals Commission.

The whole of the University Unit which was stationed so long at Saloniki is now in England. The last section left Greece early in September and reached England about the 1st of October.

The Military Cross has been awarded to the following: Dr. R. H. Macdonald (Capt.), of Winnipeg; Dr. A. McCausland (Capt.); Dr. R. J. Manion (Capt.), of Fort William; Dr. A. C. Johnston (Capt.), of Alberta; Dr. F. L. McKinnon (Capt.), of Winnipeg; Dr. G. R. Ross (Capt.), of Montreal; Dr. Arch. Macpherson (Capt.); Dr. Harvey C. Smith (Capt.); Dr. J. E. Affleck (Capt.), and Dr. R. B. Martin (Lieut.).

Dr. Walter McKeown (Lieut.-Col.) was temporary O.C. at Kitchener Hospital, Brighton, England, during the absence of Dr. Shillington, who spent a short time in Ottawa on leave.

Dr. Donald McGillivray (Major) has been gaining in health since his return to Toronto on leave, but at the time of writing is not quite fit to return to service.

Dr. Brefney O'Reilly (Capt.), the Medical Officer of the Canadian Flying Corps, will spend part of the winter in Texas with the Canadian and American aviators.

The following officers of the C.A.M.C. have received special mention for services rendered: Col. R. D. Rudolf; Lieut.-Cols. Jno. Amyot, C. H. Gilmour, Perry Goldsmith; J. McCombe, H. E. Munroe, R. Raikes, H. M. Robinson and C. L. Starr; Major R. E. Wodehouse; Capts. A. B. Chandler, W. Enright, T. F. Graham, H. C. Hall and W. B. McDermott.

Dr. H. R. Casgrain (Lieut.-Col.), of Windsor, has recently been appointed C.O. of the French-Canadian Hospital at St. Cloud, near Paris. Dr. Casgrain left Windsor three years ago in charge of No. 3 Stationary Hospital. While on the Island of Lemnos he became seriously ill and was removed first to Alexandria and then to England. After his recovery he was for some time O.C., Bushy Park Red Cross Hospital, Hampton Court.

Obituary

RICHARD H. BONNYCASTLE, M.D.

Dr. Dick Bonnycastle, of Campbellford, Ontario, joined the R.A.M.C. soon after the war was declared. After serving in that Corps for a time, he was transferred to the C.A.M.C. He became Captain, May 16th, and Major, August 16th, 1917. At the time he attained his majority he was in poor health, and died at his home in Campbellford, October 8th. He graduated M.B. from the University of Toronto in 1905.

MURRAY HULME PATERSON, M.D.

Dr. Murray Paterson, who graduated M.B. from Toronto University in 1914, was one of the brightest of our young medical graduates. He was acting as interne in the Children's Hospital, Toronto, when the war broke out. He at once volunteered and soon went to the front. He was wounded in the trenches, but he suffered especially from shell shock. He was cared for at Orpington for a time and then was removed to London. We just heard by mail, October 15th, that he is dead, and that the circumstances surrounding his death were exceedingly sad. We are told that before coming to Toronto he lived in Chatham.

GEORGE THOROLD DAVIDSON

Among the saddest of the many terrible tragedies is the death of Lieut. George Thorold Davidson, only son of Dr. Alexander Davidson, of St. Clair Avenue, Toronto. He was reported missing in October, 1916, and during a long year the members of his family and his many friends had hoped that he was still alive. The hope was vain, however, as his friends now know that he died a prisoner in the hands of the Germans on October 26, 1916, from wounds received while reconnoitring during the Somme battle. Thus is another name added to that appalling list of only sons who have made the supreme sacrifice. Profound and sorrowful sympathy go out from the whole profession to Dr. Davidson and his bereaved family.

W. J. R. HOLMES, M.D.

Dr. W. J. Holmes, Goderich, died October 14th, aged 75. He practised for some years in Brussels, and took a prominent part in politics as a Liberal. He also took an interest in military matters and was for a time Surgeon Lt.-Col., Huron Regiment. He was for many years treasurer of the County of Huron.

FREDERICK PHINEAS DRAKE, M.D.

Dr. Fred Drake, of London, was for many years one of the most popular physicians in Western Ontario. While he was supposed to be enjoying fairly good health, the report came that he died suddenly at his home, October 6th, from heart disease. He graduated M.D. from Victoria University in '83, and after doing post-graduate work in Great Britain and Vienna, commenced practice in London. He was much interested in public affairs, and shortly before his death his friends were endeavoring to persuade him to become a win-the-war candidate at the coming Federal election.

Dr. W. J. Bryans, of Toronto, has recently received full particulars of the accident which caused the death of his son, Fraser. He was practising diving under another machine when one wing of his own machine was torn away in a collision. His machine went down and he fell into the sea from a height of 800 feet. The remains were brought to Toronto and buried with military honors Oct. 11. During the funeral service the Rev. Dr. Pidgeon eulogized the late Flight-Lieutenant, who, he said, was a man of sterling qualities and admirable traits. To speak in public or address the smallest gathering was too great an ordeal for him, and yet when he came to " doing things," without hesitation he dared deeds of valor before the whole world. His pastor, the Rev. Mr. Freeman, said the impression he had left behind in St. Enoch's Church was such that the name of Fraser Bryans would be spoken in future with profound reverence and respect.

We regret that an error occurred in our obituary notice of Dr. G. L. McKinnon, of Alton, in the October issue. It appeared in the context that his age was 74. This was rather an absurd mistake, as Dr. McKinnon was of course a young man.

Book Reviews

Sanitation for Medical Officers. By Edward B. Vedder, M.D., Lieut.-Col., Medical Corps, U.S.A. Illustrated. Lea & Febiger, Philadelphia and New York, 1917.

In a convenient pocket-sized manual, a great deal of most useful information has been incorporated by Colonel Vedder. This is the first of a series of medical war manuals, authorized by the United States Government. The official regulations, of course, apply to the United States army, but these are modelled closely on those which have been in use in the Canadian army since war became a reality in 1914.

The subject of sanitation is discussed under the headings: The Camp, the March, Trenches and Battlefield, Insects Concerned in the Transmission of Disease, with a chapter on Transmissible Diseases. Some very useful illustrations and diagrams are included, while the different sections are interleaved with blank pages for notes and memoranda.

The Roentgen Diagnosis of Diseases of the Alimentary Canal. By Russell D. Carman, M.D., head of section on Roentgenology, Division of Medicine, Mayo Clinic; and Albert Miller, M.D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages, with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $6.00 net; half morocco, $7.50 net. Canadian agents: The J. F. Hartz Co., Limited, Toronto, Canada.

The important place which roentgenoscopy has come to occupy in the diagnosis of disease is recognized by all clinicians, but we fear that there has been a pronounced tendency to lay too much stress upon the X-ray findings and advise complicated surgical procedures upon the opinions of X-ray operators who are far from being competent to decide such important questions.

The conservative attitude adopted by the authors of this most complete volume is to be commended. It is doubtful if any have had such opportunities for correlating X-ray and operation findings. The subject is discussed most thoroughly, and the book is profusely illustrated, while an extensive bibliography is appended.

The internist will find such a book invaluable, but the X-

ray specialist should profit even more by its careful study, and in particular consider the words of Dr. W. J. Mayo, that only about one person in ten, with gastric symptoms, has a gastric lesion.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, assisted by LEIGHTON F. APPLEMAN, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Vol. III, Sept. 1917. Lea & Febiger, Philadelphia and New York.

This interesting and welcome quarterly comes again to hand, better even than usual. The pages by Ewart are all too few, and are of surpassing excellence. Gottleib's summary of dermatology is exhaustive and complete. The only criticism we could offer is that it is perhaps too full of his own personal views on matters which might better be left to the reader's judgment. Davis deals with obstetrics in his usual masterly way, and Spiller takes up the nervous system. This number has seldom been equalled.

Diagnostic Symptoms in Nervous Diseases. By EDWARD L. HUNT, M.D., Assistant Professor of Clinical Neurology, College of Physicians and Surgeons, New York City. Second edition revised; 12mo of 292 pages; illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $2 net. Canadian Agents, The J. F. Hartz Co., Toronto, Canada.

The rapid appearance of a second edition of this most useful manual is sufficient to indicate its proven value to physician and student alike. Any system by which can be correlated the complex manifestations that are met with in the study of diseases of the nervous system is a boon to the profession.

The first chapter takes up in detail the examination of a nervous case. In succession are discussed such important symptoms as tremor, gait, vertigo, the reflexes, the eye, together with many others. Chapters on examination of the cerebro-spinal fluid, and the electrical reactions completing the book. Several excellent illustrations are included, the whole making a book than which a more useful one for its purpose can not be conceived.

PRESIDENTIAL ADDRESS—THE ACADEMY OF MEDICINE*

BY PRESIDENT D. J. GIBB WISHART, TORONTO.

Fellows of the Academy of Medicine:

I had almost said in Presbyterian phrase, "Fathers and Brethren"—

I hesitate to appear before you this evening and from this seat to address you upon subjects upon which I feel so ignorant.

This Academy which I watched through its pre-natal development and at whose birth I assisted, has become in the ten years of its existence such a healthy, thriving youngster with such a capacity for earnest achievement, and withal, with a wilful temper requiring guidance and perhaps the curb, that my heart may well fail me lest I come short in making the year of my official control one of distinct progress.

The rule by which you enlist for three years the services of the individual selected for your highest office—the first year as vice-president, the second as president, and the third as consultant in chief—is, to my mind, most wise, for thereby he is at once trained and stimulated,

It is my pleasing duty to direct your thought first to the programme for the year's study. The programme should be annually prepared in advance with a view to definite progress in a scientific direction. It should not be arranged haphazard nor capriciously.

Each eminence gained upon our path opens up vistas of land unexplored. It is given to our profession to pursue as fascinating an exploration of new truths as ever it was to those intrepid voyageurs who threaded their way across the ocean, entered the Hudson Straits or the mighty St. Lawrence and blazed their paths across this continent to the Pacific. It may be, at times, a false idea, an *ignis fatuus* which leads us on—and we may in our zeal venture to name our mighty rapid a Lachine—but still it is truth and truth only that is our one endeavor.

Our pursuit must never be aimless and I invite the executives of each of the sections to assist in directing the forces of

*Delivered at the Mining Building, Toronto, October 2nd, 1917.

the succeeding year in such a way as will ensure a maximum of success and a minimum of wasted effort. The suggestions thus handed on will ensure a steady development.

Even as it is, what a wealth of experience is available for each of our Fellows who makes his attendance a serious effort, who takes the programme and directs his reading along the lines it suggests, and makes it a resolve to assist his Fellows onward? As iron sharpeneth iron so will such a Fellow increase the usefulness of his section.

We hope to issue an advance notice of our season's course of study and invite your careful perusal thereof, and a regular preparation for each evening's task.

During the summer your officers have had a few matters of importance to transact. The Commissioner invited us to a couple of final interviews upon the position taken up by the followers of the various cults seeking to assist us in the pursuit of medical truth, and we have reason to expect that his report has been finished and that its proposals will presently be laid before the Government and the public. There will be need of a close scrutiny of this report by every Fellow, in a united endeavor upon our part to secure our one aim, that every student of medicine, in the widest application of the term, be required to take the one full course of study and pass the required tests, after which he may practise as he may elect.

It is interesting to note in this connection that the labor and research of our past president, Dr. Ferguson, in the preparation of the articles upon False Systems of Healing have been recognized officially by the American Medical Association's Council on Medical Education.

As you are aware, the Academy held a special meeting in July and placed upon record its views upon the failure of the Government to place the care of the Returned Soldier in such hands as the profession could trust and respect. I regret to say that matters, up to the present, have not been improved, nor have either the daily press or the Government shown any serious appreciation of the fact that the questions involved are primarily medical and as such amenable only to a medical tribunal.

The Academy has also taken steps to meet the attempt to victimize the public by the exploitation of various alcoholic beverages known as "Tanlac," etc., etc., and trust that presently we shall see the termination of this newest method of trading upon our aches and ills.

The House Committee has made new arrangements regarding the caretaking, and measures to prevent a recurrence of the discomfort occasioned last winter through inadequate heating.

Shortly after the inception of our Academy, steps were taken to ensure for our citizens a supply of healthy milk, and a Milk Commission was appointed by this body. The result upon the milk was very beneficial, but the process has been costly to the public pocket. Is it not time that we as an Academy urged a further step forward, the municipalization of the entire milk trade of the city, including the control and ownership of the dairy farms, the purification and preservation of the milk, and its distribution to the citizens? This would greatly cheapen an essential article of food, by the cutting out of competitive advertising, and the present prodigal waste of time and labor in distribution.

As an Academy, our duty with regard to venereal diseases is not yet discharged.

The striking increase in the prevalence of venereal diseases in Canada is a question that must interest the whole medical profession. There are those who insist that the increase does not exist, but stubborn facts make apparent the falseness of their claim. The reluctance of legislative bodies to deal with this question is to be greatly regretted and there can be no reason why this Province should not include these diseases in the Contagious Act. A very slight alteration of this Act would enable the police and other authorities to place the dangerous elements in society under control.

The women of the street, who at present are at liberty to come and go as they please and who carry on their wretched traffic unhindered, could thus be taken care of and treated in the early stages of the disease. This would enable the authorities to weed out the defectives among these classes and as a great proportion of the women actually engaged in the illicit traffic are definitely feeble-minded, they might be segregated, if the citizens would wake up to their responsibility.

It is, in my opinion, the duty of every physician to educate the people of the community to a knowledge of the present peril and to suggest this most sane way of dealing with it.

The well-known cover of Bairnsfather's "Fragments from France," bears the cartoon of two Tommies sitting in their dug-out contemplating the effect of a well-placed enemy shell, and remarking "There goes our blinkin' parapet again," an en-

deavor by the artist to give utterance to the feeling of being—as the "Student in Arms" has it—"blasphemously fed up." We, as an Academy, are "blasphemously fed up" with the misdirection of the medical side of Canada and the great war by our Government and our Militia Department. The profession in Canada has always occupied a high position, in the standing of its institutions of Medicine, in the training and quality of its rank and file, and in the skill and wisdom of its leading practitioners, but we fail to note that a single endeavor has been made by those who govern to make use of these in any fair and proper way, although our profession has been equal, at least, to that of any other of the Allies, in the way it has come forward to assist, and to die when needful.

Compare the action of the United States. No sooner was war declared than the acknowledged leaders of Medicine in every single department were called to Washington to consult on the most scientific way in which the trained profession could be utilized, and these committees were given full control as to the selection of men to fill the various positions. To take one instance—the Oto-laryngologists were listed to the number of 5,488, and in July every one of these men was circularized, and their replies card indexed. In Canada, it has been most haphazard. A few of our leading physicians and surgeons have been sought out, but the majority have not been called on, and in not a single instance—except this summer when the Dominion Medical Council was invited, I understand, to offer some suggestions, have any of our Medical Associations, University or scientific bodies, been used for their legitimate purpose. There has been no "win the war" policy in Medicine.

The recent action of our College of Physicians and Surgeons in circularizing the Ontario profession is a step forward, but for this the Government cannot claim credit.

The result of this lack of initiative is self-evident. There has been a complete breakdown. The C. A. M. C. is considered by a Parliamentary committee to be a failure; there is a committee of laymen placed in charge of the returned soldiers; our respected fellow and guest, General Fotheringham, has been dallied with so long at Ottawa that his resignation has been sent in; there is no permanent Surgeon-General at Ottawa in whom the profession can place confidence, and if there were, he would not have a voice at the table of the Militia Council. My thought upon this subject is well expressed in an editorial of the *Journal of the American Medical Association* of July 28th:—

"The medical service has not been given the rank and authority which its importance deserves, and the work of the medical department, and the views and opinions of medical officers have not been given sufficient weight by military men. To permit an officer with military training alone, no matter how high his rank or how brilliant his attainments as a soldier, to dictate conditions regarding the hygiene and sanitation of troops and the management of hospitals, is as ridiculous as it would be to give a surgeon authority over the artillery or the aviation corps. Subject always to the necessities of warfare, the military and medical services must be on an equality. Each line of activity requires highly specialized, technical training. To permit either one to encroach on the field of the other is not only absurd, but is often suicidal. Especially should there be the closest co-ordination and co-operation between the military and medical officers in order that the Medical Corps may be of the greatest assistance. This is the lesson which Japan learned in Manchuria, and which the English have demonstrated on the Western front."

And in the utterance of Lord Esher, in the *London Times* of February 3rd:—

"Certainly the control of the Adjutant-General's branch over the Royal Army Medical Corps was and is responsible not only for the early failure to grip the medical factors of the war, but they hampered conditions under which the Surgeon-General worked. His triumphs and those of the Royal Army Medical Corps have been achieved in spite of obstacles that the subordination of science to ignorance, and of elasticity to military discipline explains, but cannot justify."

The passage of the Military Service Act at Ottawa raises two questions of intense interest to our profession: 1st, What number of army surgeons can the profession of this country legitimately supply; and, 2nd, Shall students entered upon their course of medical study be liable to the draft?

In August last, the Central Medical War Committee of Great Britain informed the Government that after a careful survey of the whole of England and Wales, it is of the opinion that no more physicians can be called on to take commissions in the Army Medical Corps without seriously endangering the supply of physicians for the treatment of the civil community.

In Australia the stress has become so great that the senior practitioners are being called upon to come forward and take

on the younger men's job, and it is announced that the Department of Defence will send to France within the next two months every available physician.

In New Zealand we are informed that "as regards medical service for the civilian population the position is now becoming very acute." The Minister of Public Health there recently pointed out the absolute necessity which had arisen for the mobilization of the medical services, and the exercise of control in the location of physicians.

I have recently been invited, semi-officially, to ascertain who among the Toronto practitioners beyond the army service age, are ready to step forward and assume the duties of house-physicians and surgeons, laboratory and dispensary assistants.

So far as figures are obtainable, 75 per cent. of the classes which have been graduated at our University since the war began have joined the C. A. M. C., or R. A. M. C. For three years past, therefore, the accessions to the ranks have been inadequate to supply the loss through death.

The second question is also important. This arose first in Britain, where, as it has proved unfortunately, all students of medicine under the fourth year were drafted as combatants. In the United States the question is now to the fore. The registration recently made covered 8,983 students of medicine, or 85.9 per cent. of all students upon the rolls of the medical schools. In Canada, at the outset, the men in the senior years were advised to remain at their studies, but the juniors were not discouraged from enlisting. The draft will affect as large a proportion of the medical student body in Canada as in the United States. There, however, the question has been solved by the ruling of the President, that all hospital internes, and medical students of the 2nd, 3rd and 4th years, may be enrolled in the Enlisted Reserve Corps of the Medical Department, and pursue their studies while remaining in the military service of their country, but always liable to a call to service by telegraph or letter.

A resolution was adopted by the Canadian Medical Association at its last meeting in Montreal, urging upon the Government the necessity for the mobilization of the entire profession, in order that all those fitted for service overseas by age, and health, and freedom from family duty, might be sent forth, and further, that all others might be assigned to such service at home as their training, and the necessities of the country demanded.

The war is making great demands indeed upon our profession. I do not know of any other profession where similar incomes have been thrown to the winds at the call of duty, and yet we must be prepared to do still more.

It will be wise if this Academy make representations to the Government, both as to the best means of providing medical attendance for the people at home and their sons overseas, and also as to the provision of a continuous supply of students to fill the ranks of the profession depleted by death and enlistment.

It is also true that the relatively low rank under which medical officers serve, handicaps their work both individually and collectively, and in Canada a low estimate has been placed upon the Army Medical Service, the result of defective legislation, which should have been remedied long since.

It is not too late yet for the Government to summon "intelligence" to its aid. Numbers of our profession have gained experience through service that would make it possible for them to give advice that would bring order out of the chaos that exists, and it is due to the high intelligence of our profession that the Government get the best advice which the leaders of medicine can supply. But we want no party politics. Let efficiency alone be considered, whether in appointments in Canada, Great Britain, or the field.

In looking over the work of our Academy in its many phases I am confronted by the surprising fact that we have as yet made no attempt to establish a Historical Museum. There are many interesting details connected with medical institutions which have passed out of existence, with leaders of the profession who are dead and gone, historical facts, relics of those we respected, medical diplomas, documents, etc., etc., which it should be the business as well as the profit of our Academy to collect and collate.

With the cordial permission of your council, I have appointed a committee of interested Fellows, and have great pleasure in handing the treasurer a cheque to form the nucleus of a special fund to start this branch of our legitimate work. I invite your co-operation. Give your ideas and information to the members of the committee, and keep an eye open to every opportunity which offers to obtain material for our Historical Museum.

Where questions of public welfare relating to medicine are concerned, the great obstacle to the proper presentation of the weight of medical opinion before Parliament and the public,

has been the lack of organization of the profession. Little attempt, if any, has been made to achieve this end by the College of Physicians and Surgeons, who stand, naturally, as the representatives of the profession in this Province, nor has this slight attempt been followed by any measure of success.

The Ontario Medical Association, as the Provincial Branch of the Dominion Association, has been laboring for some years to evolve a scheme, and basing its efforts, to an extent, upon the plan followed so successfully by our confreres in the United States, hopes this fall to put the matter through its final stages, and secure a ready and certain method of bringing medical opinion to bear the full weight to which its training and intelligence entitle it.

It is unnecessary to point out to this body the need which has brought this action about. There are so many questions in which it is highly necessary that the profession speak out with a concerted voice so that the public may be informed, or warned, it may be; or, on the other hand, that a professional body exist, which the representatives of the public may consult before legislation is finally enacted. The success of this Academy is largely due to the influence it has exerted upon such questions as the Workmen's Compensation Act—the presentation of evidence before the Medical Commission, etc., and those who attended our Annual Meeting last May and listened to the reports of our various committees, must have been amazed at the scope of our energies. If the Academy of the Capital of the Province could accomplish so much, what cannot be effected by a properly organized body representing the entire medical opinion of the Province and later of the Dominion, if we can induce the profession of the other Provinces to follow our example? Had a Dominion body existed, such as I have indicated, we should not have seen a body of laymen appointed to tell the profession what to do medically for the returned soldiers.

To my way of thinking, whether it be in matters military, hospital, or of public health, the effect of legislation has been to bring it about that our profession has been degraded to be the hewers of wood and drawers of water for those who advertise themselves as being business men, and this reproach "that we of the profession are not business men" is often hurled at our heads. By the reorganization which is planned, every reputable physician in the Province will have an opportunity of expressing his views upon all matters of public import medically, and in such a way that no legislative body can afford to pass them over lightly.

While the public has a duty to the profession, the profession, on its own side, has a duty to the public, and the occurrence of such unfortunate incidents as took place in connection with a well-known criminal case of the past summer in this city is a disgrace to us.

Ignorance of responsibility by the attending physician and the hospital authorities, is a reflection upon the training of the student, and the knowledge that every licensed practitioner should possess of the code of ethics which we profess.

Are you each personally aware that you are obligated to obey a code of ethics? I wonder. Nevertheless the law does not excuse a man because of ignorance, and our By-law No. 10 is decisive. We are bound by the Code of Ethics of the Dominion Medical Association. How many of you have even read these, let alone committed them to memory, and yet you are bound to these by oath. I am afraid students enter upon the study of medicine too often as a means of livelihood or business, and do not know that they thereby assume great responsibilities. As was stated in a *Globe* leader of a few weeks since:

"Medicine is not a private profession. The medical man today is not merely a private practitioner; he has a social obligation; he is a trustee for society, his duty to his patient and to his patients' friends must be read in the unwinking light of his own social responsibility as a guardian of public life and a leader of public opinion."

"The public good is the moral standard by which professional service is tested."

"Privileges recognized by the public and protected by parliament give duty supreme claim, and make that obligation binding upon every member of the profession."

I am not desirous of deprecating the high standard of conduct which characterizes our Fellows. My wish is to point out that we must force all the members of our profession to recognize that they must think and act as we do, or leave our ranks. We are far too lenient with those who commercialize our calling. We are disposed to protect the failings of our brethren, even when we recognize that these failings are due to a low moral standard, and not to the inadvertences which the experience which comes with years will remedy. Medical science is advancing rapidly. No one among the public can point the finger of scorn at what our profession is doing for the world. Are we at all keeping pace with this advancement, in the recognition

of our moral and ethical responsibilities? Is the practitioner of to-day standing in each community upon a higher plane than did his predecessors? Is he the leader in all measures for the public good?

We boast of our advance in knowledge, but "knowledge is power, and power is not for personal advantage, or for private gain, but for social service, and for the public good."

Let us beware where we stand, lest we fall.

The very humblest man or woman who receives the license to practise medicine should know that by that act, the honor of the highest of the professions is committed to their charge; that whether they walk abroad or sit at home—they embody in their persons the dignity and moral responsibility attached thereto, and that they stand pledged, as the Hippocratic Oath has it, "that with purity and with holiness they will pass their lives and practise their art."

What can we do, beyond individually setting the highest example we know how; frowning down all suggestions in thought or expression which savor of a lower standard; seeing to it that our new Fellows, as they are elected, receive instruction in the rules which govern our conduct, and requiring of those bodies which educate students of medicine, a definite course of teaching from such living exponents of our standards as one whom I see before me to-night.

Personally, I have always regretted that such matters form so unimportant a part of the medical curriculum at the Universities, nor can I find that a graduation oath is demanded by the College of Physicians and Surgeons, or by any of the Universities of this Province, with the exception of Queen's, while that administered to the graduates of McGill is in Latin.

It may be asserted that an oath has little weight, but no Masonic initiate could forget the oath he takes, and its administration would, at least, serve to draw to the attention of the attestant the solemn character of the service upon which he enters, and there is no reason why every practitioner should not legally be compelled to keep a copy of the oath in a prominent place in his office as a perpetual reminder of his duty. The oath should be administered at graduation, in no merely formal way, but with a solemnity befitting its nature.

The sin of the educated practitioner is, as a rule, one of ignorance, and as things are now conducted, there is little wonder that this ignorance exists.

An evil which has been very prevalent among the profes-

sion to the South, and which was a factor in the inception of the American College of Surgeons, has shown its hydra head in Ontario and in Toronto. I refer to fee-splitting.

To mention it is to condemn it. It is a frankly dishonest transaction which stamps as a fraud the practitioner who demands his pound of flesh. It destroys all possibility of the patient obtaining an honest opinion from his attendant if that attendant is to share in the fee of the operator to whom the patient is referred by his attendant. Timothy was assured by St. Paul that the love of money was the root of all kinds of evil. This is one of the evils which not only injures the parties to the transaction, but commercializes the profession and gives sure and certain ground for distrust on the part of the public.

It is to the interest of this Academy to " wage a relentless war of extermination upon this degrading and dishonest practice, so fatal to professional honor and integrity."

I am credibly informed that men in this city have endeavored to solicit the operative work of practitioners upon the frankly stated basis of a fifty-fifty division of the fee, and I have personally been solicited by a general practitioner to state what percentage he might expect to receive upon referred cases. The physician who sells his soul of honor for a paltry fee, and the would-be surgeon who builds up his experience upon cases referred upon a financial basis of share and share, are equally abhorrent, and with your help we will drive them from our midst.

This naturally introduces the subject of the training of the surgeon. Surgery has been well defined as " a science founded upon certain fundamental principles, without a thorough knowledge and understanding of which, no man can do himself or his patient justice."

As Dr. Finney has said, " No doctor, no matter who, without a thorough surgical training, has the moral right to attempt to make a practice of surgery. He may succeed in doing certain minor operations, or even certain major operations, well; he may learn to do mechanically certain things satisfactorily to his patient and to himself, and he may have a fair percentage of success; but, sooner or later, he will meet his limitations, and in attempting to go beyond these, with his small and imperfect equipment, some of the catastrophes of surgery will happen, and then, who pays the price of his temerity and ignorance? Yes, let me repeat, surgery is far too serious a matter to be lightly undertaken by those who are not thoroughly

The Doctor a Dietitian

Modern Science is well abreast of modern advancement along all lines. The Physician no longer thinks of restricting his work and service to a formal diagnosis and the writing of prescriptions.

Recognizing that "Nature unaided fails" the modern Medical Man ***aids*** nature—assists natural functions in his patients. In this service, the question of food—easily digestible, nutritious and available food—becomes as vital as the selection of indicated medicaments.

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P—4

trained in the fundamental principles underlying its proper performance."

It is not necessary to leave this city to see in well-equipped operating rooms, heinous crimes committed against the most fundamental surgical principles and techniques. These are done by men who, for the gain of filthy lucre, would shorten the regular and necessary steps to a reputable surgical practice. They will not agree to spend several years as an assistant and understudy to a surgeon of experience, but by various underground expedients, solicit cases upon which they may try their prentice hand.

No hospital which values its reputation, or which appeals to the public for financial support upon humanitarian grounds, has the slightest right to open its operating rooms to any but tried and experienced surgeons of established and good repute, unless it be in the capacity of assistant only.

We read everywhere articles suggesting that the one great effect of the war will be a new world—a fresh outlook, an upsetting of accepted aspects of truth—a fundamental change. In fact, it will usher in a reign of "peace and good-will to men." What, we are asking, will be its effect upon medicine?

Those of you who have read the second volume of "A Student in Arms" will have been struck by the chapter entitled "The Good Side of Militarism," where Donald Hankey refers to the fact that in pre-war days "self-realization" was considered to be a primary duty of every man and woman, and the words "Fear God and keep His commandments" amended to read "self-realization"—but that as a result of military discipline as practised in the 20th century by the democracies of the world, we have learned the "unimportance of individuality, realizing that in a national, a world crisis, it counts for nothing"—the good soldier has learned the hardest lesson of all—the lesson of self-subordination to a higher and bigger personality. He has learned to sacrifice everything belonging to him personally, to a cause that is far greater than any personal ambition of his own can be.

In medicine we have seen great things—the death-rate of the army from disease reduced far below that of the civil community in the times of peace; camp sanitation; the purification of water; minute attention to the bodily care of marching soldiers; vaccination against typhoid and tetanus; have achieved amazing results, and honors are pouring in upon those of our profession who have taken the lead in demonstrating what re-

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sults may be obtained when medical science is utilized to the full. We are every one proud of our own Col. Nasmith, C.M.G.

Is it not evident that the effect of all this is to exalt the preventive side of medicine; to reveal to the world that syphilis, the care of the child of school age—tuberculosis, etc., etc., may be taken out of the hands of the family practitioner and assigned to the care of the State? May these not be the signs of the times that the day of the competitive physician and surgeon is over and that presently he must become a member of a panel and have removed from him the opportunity to exploit his experience for mere gain—that as his training is even now largely paid for by the State, so his employer hereafter may be that same body. The greatest good of the greatest number.

What will follow will be, and already there are ominous movements in the not too solid ground on which we stand—that those who teach in our clinical and final subjects will be whole time men, paid by the State at a salary commensurate with their responsibility and with an equal allotment of money for the maintenance of the laboratory side of each department.

I am not a prophet, but let us not mistake, there are great changes coming.

Fellows of the Academy of Medicine, let us then be up and doing, and remembering the words of our example, the Great Physician, "work while it is day."

47 Grosvenor Street, October, 1917.

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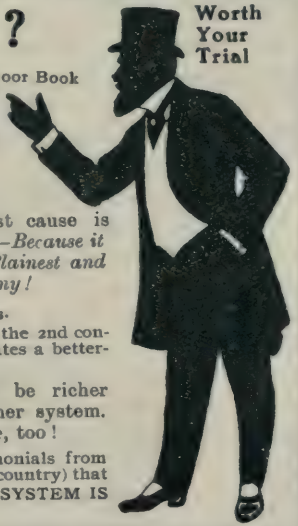

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Selections

Cinnamon as a Prophylactic

The value of oil of cinnamon as a preventive of influenza, as well as a remedy for colds, was pointed out by Dr. J. Carne Ross some years ago. Since then an essence, consisting of the oil dissolved in spirit, has been in great demand as a popular remedy in winter time, a fact which gives indication of its value therapeutically. A correspondent in the *British Medical Journal* now calls attention to the value of powdered cinnamon as a prophylactic against measles and "German measles." In a large institution, where twenty children had come in contact with a case of the latter, each child was given night and morning as much powdered cinnamon as would lie on a sixpence. No second case of German measless occurred. Such evidence is, of course, purely negative in character, but the method is harmless and worthy of a trial.—*The Prescriber.*

Artificial Oedema of Limbs

Mériel (*Paris méd.*), calls attention to an elephantiasis-like œdema of the limbs following slight wounds (small shell fragments, burns of the second degree, superficial contusions, incomplete fractures of radius and fibula.) The infiltration is larger and more durable than that seen after similar injuries in civil practice; and owing to the condition many men have been discharged as permanently unfit. Cases having recently come in greater numbers before medical boards, Mériel became suspicious, and discovered that the œdema was generally the result of constriction for many days consecutively by a piece of string or cloth. The artificial origin of the œdema was proved by its disappearance under a plaster bandage left in position for a fortnight. In some cases the artificial œdema when recent is slight and curable; more often, when the constriction has been kept up, trophic lesions are produced which become permanent or take a very long time to disappear. The lesion is a more or less considerable œdema, always segmental, on the hand or foot, going upwards to the forearm or the leg, variable in consistence, sometimes hard but most frequently soft, pitting on pressure; the skin is glossy, thin, cold, sometimes bluish, sometimes white.

DIFFERENTIATING THE PNEUMONIAS

according to the method of the Rockefeller Institute, is considered of great importance by a number of physicians.

It has been repeatedly shown that one type of pneumonia confers no immunity as regards other types. A patient convalescing from Group IV, for example, may contract Group I infection from another patient.

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applied hot over the entire thoracic wall, is the safe and sane adjuvant in treating ALL pneumonias, and is equally efficacious in

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The swelling, whatever be its upper limit, is always bounded by a well-defined cushion, beyond which the tissues are perfectly healthy. There is great impairment of movement of the fingers. They are thick and sausage-like, or are kept apart by enormous lymphatic infiltration, which after a time causes trophic lesions due to neuritis. Sometimes there is segmental anæsthesia; sometimes sensation is normal, or there may be slight hyperæsthesia. Apart from the clinical signs of various sensory disturbances a proof of these neurotic lesions is furnished by the X-ray, which reveals well-marked decalcification of the bones of the hand and foot. But while neuritis is indisputable, it is secondary and not primary. This, according to Mériel, proves that the œdema is not due to neuritis following nerve injury, but that it is œdematous infiltration caused by induced vascular lesion causing the neuritis. The neuritis does not retrocede like the œdema; it persists much longer, and in time inevitably produces the disability desired by the patient. —*British Medical Journal.*

Synthetic Alcohol

In these strenuous times many attempts are being made to overcome the handicaps of nature, and to provide from other sources substances needed for the life of the nation or the requirements of the war. Nearly always alcohol is obtained by the destructive fermentation of a carbohydrate which otherwise might have been employed for food, so that any method by which alcohol can be obtained from other substances, and at a reasonable price, would conserve the supply of food. In Switzerland alcohol for commercial purposes is greatly needed, and at the present time almost the whole of this has to be imported. In that country, however, there is an almost unlimited supply of electricity obtained by the aid of the innumerable waterfalls, so that calcium carbide can be prepared very economically. This calcium carbide is the starting point, and from it is prepared acetylene. This acetylene is made to unite with a molecule of water to form acetaldehyde, and with this are combined two atoms of hydrogen, and so alcohol is formed. It is in this way possible to obtain a ton of alcohol from two tons of carbide and 500 cubic metres of hydrogen, requiring for their production only 2½ tons of coal and 4 tons of chalk. If the process is found to be commercially of value, it should be of great importance in manufacturing processes. Those who are opposed

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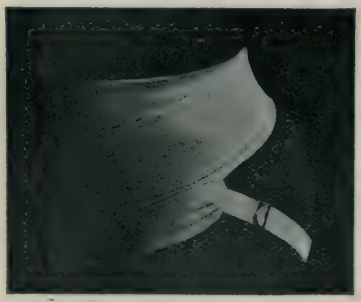

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absolutely to the use of alcohol as a beverage need be under no apprehension that this new process will tend to encourage the use of alcohol as a drink, for the alcohol so produced will be not more suitable for internal use than ordinary potato spirit.—*The Hospital.*

Radium: Further Clinical Observations

Dr. Douglas C. Moriarta, of Saratoga Springs, N.Y., stated that radium, as a therapeutic agent in certain cancerous conditions, had not received the consideration to which it was entitled, either as an adjunct to surgery when all the infected tissues were not or could not be removed, or as a palliative measure in inoperable cases. In a case of cancer of the rectum, the rectum and sphincters became functionless, and after the use of radium they functioned again. While this patient lived only a few months, the relief of the condition was a source of comfort to the patient and his family. While clinicians and physicists only conceded the gamma rays to be active at a distance of from three to five centimeters from the points of application, and claimed that beyond this distance they would stimulate the growth, he personally questioned the accuracy of their conclusions, believing that the distance at which the gamma rays acted might be influenced or stopped in some manner by the individual infection, or peculiar resistance of the tissues, and he would quote briefly two cases to justify this conclusion.

The first was a case of procidentia in which the uterus was four by six inches in size, with the cervix everted so that it had the appearance of a large cauliflower, five inches in diameter. Radium was applied, the growth relieved, the cervix resumed its normal contour, and the uterus diminished in size and receded to its normal position in the pelvis.

The other case was that of a negress, 46 years old, who had a fibroid of six years' duration, undergoing cancerous degeneration. It filled completely the abdominal cavity and extended to the ensiform process. Radium was used, and now, after five months, the growth was about four inches in diameter and movable. The distance from the point of application of the radium in the first instance was from 12 to 15 centimeters, and in the latter case about 30 centimeters.

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Miscellaneous

Local Injections of Alcohol in Neuritis

J. A. Sicard (*Revue Neurologique*) has tried the injection of alcohol into the affected nerve trunks for painful conditions left by war wounds. The results of a year's experience encourage him to recommend the method. The technique consists in injecting 1 to 2 c.cm. of alcohol at 60 deg. C.—or 80 deg. C. if the pain is of old standing—into the exposed nerve, at least 3 centimetres above the lesion; the injection should also be made into all the tributary branches within the painful area. As alcohol paralyses both the motor and the sensory fibres, the treatment is applicable only when the pain is so sharp and continuous that the patient clamours for intervention of any kind, even amputation. Motor paralysis caused by alcoholization of the nerve is of little importance when there are grave nervous lesions which have already induced almost complete sensori-motor paralyses.—*British Medical Journal.*

Autumnal Ailments

The autumn months constitute the season during which the average practising physician is called upon to treat the following conditions: 1. Typhoid fever, which is, more often than not, contracted at some unhygienic summer resort. The patient may return home during the first week or so, with headache, malaise, etc., or the premonitory or primary symptoms may appear after reaching home. 2. Malarial infection, in certain sections, which is more than usually rife in the spring and fall seasons. 3. The after results of the gastro-intestinal disorders of infants and young children, due to improper feeding, etc., during the heated term. In almost every instance, when the acute symptoms have subsided, a condition of anæmia and general devitalization is the final result that constitutes the essential indication for treatment. In convalescence from all forms of illness resulting in general debility, Pepto-Mangan (Gude) is the one ideal tonic and reconstructive. It not only revitalizes the blood, but also tones up every physiologic function. It stimulates the appetite, improves the absorptive capacity, increases energy and ambition and restores the blood to its normal condition. It is, thus, a general tonic and reconstituent of marked and certain value.

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- Blaud (Duncan) - - 3 Pills
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After the Fight

It is better to lose with a conscience clean
Than to win by a trick unfair;
It is better to fail and know you've been,
Whatever the prize was, square,
Than to claim the joy of a far-off goal
And the cheers of the standers-by
And to know down deep in your inmost soul
A cheat you must live and die.

Who wins by trick may take the prize,
And at first may think it sweet,
But many a day in the future lies
When he'll wish he had met defeat;
For the man who lost shall be glad at heart
And walk with his head up high,
While his conqueror knows he must play the part
Of a cheat and a living lie.

The prize seems fair when the fight is on,
But save it is truly won
You will hate the thing when the crowds are gone,
For it stands for a false deed done.
And it's better you never should reach your goal
Than ever success to buy
At the price that knowing down in your soul
That your glory is all a lie.

—*Clinical Medicine.*

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The Administration of Emetine

Emetine is now largely employed in therapeutics and especially in the treatment of amœbic dysentery, and it almost always is given hypodermically. This mode of administration, however, causes intense pain, with redness, swelling, and induration. Writing in the *Lancet* of August 18, 1917, Dr. P. Figdor recommends intramuscular injections of emetine. He thinks that the best sites are on the upper arm over the deltoid and in the gluteal region. According to his experience a prolonged course of treatment can be given in this way without causing any inconvenience to the patient. There is no pain, though sometimes there is a little tenderness at the site of injection for twenty-four hours or so. Injections can be given on alternate arms day by day. Briefly summarized, Figdor believes that the advantages of the intramuscular method are as follows: (1) Pain during the operation is limited to the prick of the needle; (2) After-pain is generally absent, and when present disappears within 24 to 48 hours; (3) There is no tenderness, swelling, induration, or discoloration of the skin, and scarring is minimal or absent; (4) The efficacy of the drug may be increased, as there is probably less precipitation through more rapid absorption; (5) The same site may be used for injection indefinitely at intervals of 48 hours.

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The Canadian Practitioner and Review

Vol. XLII. TORONTO, DECEMBER, 1917 No. 12

Original Communications

THE CANADIAN ARMY MEDICAL SERVICE*

By Surgeon-General J. T. Fotheringham, C.M.G.

A summary of the activities of the C.A.M.C. may be made under the three topics:

1. Preventive medicine;
2. Clinical progress in medicine and surgery; and
3. Laboratory and research work.

Preventive Medicine.

With reference to preventive medicine the two outstanding features of the situation are:

(*a*) Preventive inoculation.
(*b*) Sanitary control in the field.

(*a*) *Preventive Inoculation.*

On the western front, where most of the Canadian medical troops have been employed, this has been mainly against the typhoid group, smallpox, and tetanus.

The percentage of inoculated men as regards the first two runs very high, practically 100 per cent.

Anti-tetanic serum has been administered in all main dressing stations to all wounded, and latterly to trench foot cases, at the time of their admission. The dose has been, as a rule, 1,500 units. The serum has been to a large extent, but not

* Summary of an address delivered before the Academy of Medicine, Toronto, October 2, 1917.

exclusively, obtained from the Canadian Red Cross Society, and is that manufactured in the laboratories of the University of Toronto through the thoughtful provision of a wealthy benefactor there.

The same remark holds true, if possible more positively, with regard to anti-typhoid inoculation. When regard is had to the practical absence of true typhoid and to the extraordinary low incidence of the other diseases of the enteric group on the one hand, and to the universal contamination of the water supply by the colon group on the other, one may truly say that a new chapter may now be written in the history of military medicine, and that the world at large owes to Sir William Leishman and the R.A.M.C. a debt which it can never repay.

Smallpox has been practically non-existent among the Canadian troops.

Dysentery has occurred in a slight, sporadic form, but not as either epidemic or endemic.

(*b*) *Sanitary Control in the Field.*

The two important parts of this many-sided problem are water control and disposal of waste. The organization necessary is briefly as follows:

1. Battalion and unit sanitary sections, specially detailed and trained by unit medical officers and employed under their direction. Responsibility rests with each O.C. for his own lines, the M.O. acting as adviser.

2. Divisional sanitary section under a specially qualified medical officer, who is also divisional sanitary officer, under command of A.D.M.S. of Division, reporting to him, and employing the other ranks of his unit as inspectors over the whole area occupied by the Division with reference to water supply, disposal of waste, and conservancy arrangements of every sort.

With respect to the protection of the water supply, in addition to the supervision maintained by the divisional sanitary sections, which is good, the Canadian corps has in action a water patrol. This patrol places a second check upon the chlorination of water.

Muddy water must first be filtered, otherwise sterilization will not be complete, the chloride of lime failing to penetrate to the centre of particles of mud.

Water patrols, covering a Canadian corps area, are in charge

of an officer under the "Q" Branch. The duties of these patrols are as follows:

(*a*) To see that rivers, streams, ponds, wells, and springs are not polluted.

(*b*) To see that no washing and no watering of horses are done at any but authorized points.

(*c*) To see that no material connected with the corps water system is destroyed or removed without corps or divisional orders.

(*d*) To visit daily each of the water tanks, stand-pipes, etc., where water carts are filled, collecting the daily report from the "divisional control" in charge.

The incidence of water-borne diseases in the Canadian corps has been low, and it may be said has only occasioned anxiety when conditions were such as to interfere with, or prevent, the maintenance of those measures which have been indicated above.

Clinical Progress in Medicine and Surgery.

1. *Injuries and Diseases of the Lung.*

In a general way we have come to a set method of treating wounds of the lung, which usually reach the base hospital not earlier than the fifth day after infliction. Gunshot wounds rarely, shell wounds frequently, are complicated. Hæmothorax is usually demonstrable, and the history of hæmoptysis is generally present. The rapidity with which blood is spat up after wounding depends on whether the upper or lower part of the lung is wounded, the hæmorrhage being most prompt in the case of the former. Fever is usually present in the earlier days, often disappearing by the sixth or seventh day. When the fever continues we draw off blood from the pleura for the purpose of culture; such cultures usually prove sterile. As a usual thing we draw off by aspiration the blood about the tenth day; sometimes the blood so drawn off is replaced in a few days by effusion, so that subsequent aspirations may need to be made. The blood so drawn off is sometimes replaced by oxygen, the outflow of blood and the inflow of oxygen being made through separate needles at the same time. Of late we have not felt so keenly the necessity for the use of oxygen; our idea was that the replacement allowed a less chance of disturbance of the bulk of the lung, with consequent hæmorrhage. An uncomplicated case is fit to travel, we judge, about the thirteenth or fourteenth

day. The possibility of seasickness and vomiting is the chief reason against allowing cases to travel at an earlier date, as the repair of the lung wound seems to be relatively slow.

With shell wounds of the lung, and in cases where the foreign body remains in the chest cavity, no set method of treatment is possible. The x-rays and the fluoroscopic screen are used to the fullest extent in all these cases; a certain small percentage of patients with foreign body are found amenable to early operation with removal. The relative infrequency of infection of the pleural blood is remarkable. I have personally seen only two cases of gas infection of the pleural blood, both of which recovered. A number of other infections by large bacilli, which might have been gas bacilli, but were not certainly so, have been treated as empyema and drained, and, so far as we know, with recovery in all cases.

In the winter such as 1916-17, there was a great prevalence of infection of the respiratory tract, including pneumonia, but it is remarkable how little prevalent lobar pneumonia has been. Severe cases of bronchitis, tracheitis, and laryngitis are common, and loss of the speaking voice is very often seen. It is difficult to distinguish mild broncho-pneumonia from severe cases of bronchitis, and the presence of pneumococcus is in no sense diagnostic, as most cases show it to be present. The diagnosis has to be made on clinical grounds, and most frequently a high degree of physical disturbance, continued high fever, and the presence of blood streaks, blood or rose color in the sputum, is used to determine the diagnosis in favor of broncho-pneumonia.

A tendency to extension of the disease from one part of the lung to another at different times in the course of the malady is remarkable, so that sometimes patients are ill for weeks, with apparent extensions of the disease; the final chart of such a patient looks like a typhoid fever chart; so true is this, that in many cases we have been compelled to make agglutination tests for typhoid and para-typhoid fever, with almost constantly negative results. The absence of sunny, clear weather in winter in the northern parts of France seems to be responsible for the slow convalescence of many patients suffering from disease of the respiratory tract.

2. *Continued Fevers (or "P.U.O." Cases).*

Considering the cases of continued fever (or "pyrexia of unknown origin") coming to the hospital, it becomes necessary

to divide them into the constituent diseases—namely, typhoid and para-typhoid fevers, so-called trench fever, and other less specific infections. Since the whole army is inoculated, the clinician is no longer able to determine on clinical grounds whether a case of continued fever be typhoid, para-typhoid, or another. The classical signs of enlarged palpable spleen, rose spots, etc., are too often absent. A dirty tongue implies gastro-intestinal disturbances, but is in no wise specific. The old-fashioned Widal test is useless, because it is positive by reason of inoculation.

3. *Methods of Localizing Foreign Bodies.*

A large percentage of the work done in an operating room of a base hospital in war time consists in the removal of foreign bodies. It is essential that this should be done with the least possible amount of traumatism, and this means that the position of the foreign body should be definitely known before the operator begins to work. The localization of these foreign bodies becomes, therefore, almost an art in itself, and the development of that art—if one may so call it—in the course of this war would be perfectly amazing to a civil surgeon.

It should be borne in mind that practically all the stationary and general hospitals sent by Canada have come from the medical faculties of the universities. A list of these it would not at the present juncture be wise perhaps to publish, but the fact that each one includes in its personnel the selected specialists and teachers in all branches of medicine and surgery from every medical faculty in the country, ensured from the outset a very high standard of professional efficiency.

It is no improper divulging of official secrets to say that, both in the Mediterranean area and in France, the highest army medical authorities state that they have found these Canadian units second to none in the whole service. Their facilities for good service, too, are enhanced by the possession in several instances of large funds subscribed by the friends of their universities at home for additions to their equipment and supplies.

Laboratory and Research Work.

The third main topic suggested at the outset of this article was laboratory and research work. Again, figures and statistics may not be given, and in any case could be as yet only partial.

But valuable work has been done by Canadian workers, both in Canadian mobile laboratories and in collaboration in British units, in Britain, in France, and in the Mediterranean.

An enormous volume of work has been done also as part of the daily routine of the general and stationary hospitals, which requires time for the making of generalizations. Special researches of which one has heard have been made upon continued fevers, pyrexias of unknown origin, nephritis, trench fever, stomatitis, meningitis and epidemic jaundice.

HEALTH INSURANCE*

By Chas. J. Hastings, M.D., M.O.H., Toronto.

Inasmuch as the strength of any nation can only be determined by the physical and mental fitness of the people that go to make up that nation, it must be apparent that any problem, the solution of which makes for nation building and race betterment, is essentially a national problem and one which should take precedence to all others.

Just previous to the war it was estimated that 700,000 men were constantly out of work in England and 800,000 were practically paupers. Of every 1,000 persons who die in old England over 900 leave no property behind, and about 800,000 are always on the brink of want. Is this democracy?

In the United States 10,000,000 are in a state of chronic poverty, and this is appallingly on the increase. There are constantly 4,000,000 paupers. Ten per cent. of those who die in Manhattan have pauper burials. Ninety-nine per cent. of the wage earners in large cities in the United States die without leaving any property. Is this democracy?

Children Underfed.

It is said that the United States possesses one-quarter of the wealth of the world; that they are richer than the British Empire and France combined; that their fortune is estimated at close on two hundred billions and their income approximately thirty-five billions, and yet on this continent it is alleged that

*Abstract of address at meeting of Canadian Health Association, Ottawa, Sept. 27, 1917.

nearly three million children go to school either without breakfast or with improper and insufficient food for their breakfast. The slavery that Lincoln witnessed in New Orleans and subsequently was instrumental in abolishing, was heavenly to this. This is what we have been calling "democracy"—it's man's inhumanity to man.

It is this unequal distribution of wealth that is responsible for driving so many human beings into cellar dwellings, one-room dwellings, two-room dwellings, and for filling our alms houses and prisons.

While much is being done by modern departments of health to make amends for the failures of the past, yet much remains to be done, and we see a valuable ally in health insurance—its relation to public health is manifest. Pioneer work on this problem has been done by European nations, and a bill for compelling health insurance to cover all forms of sickness and mishaps not covered by workmen's compensation, is now before several state legislatures and is being agitated by other states. Sickness and poverty go hand in hand, the one ever producing the other, and both are ofttimes closely allied to vice and crime.

When the Right Hon. David Lloyd George, the most outstanding character of Great Britain to-day, presented his bill for health insurance, or as he styled it, "sickness insurance," or "the people's insurance," in the British House of Commons, five years ago, among the different reasons presented by him for presenting this bill was one based on a statement in the House by the Right Hon. John Burns, of the Local Government Board, to the effect that 30 per cent. of the pauperism in Great Britain is attributable to sickness. On the other hand, however, it must be borne in mind that a large percentage of sickness is due to poverty. It is a matter of cause and effect.

Economic Conditions.

Nations are realizing more and more every year the fact that the health of the wage-earning population depends in a large measure upon the economic conditions. What then does this economic loss mean to the 2,400,000 wage earners of Canada? According to valuable data to hand, which is based on investigations into between twenty-five and thirty million industrial workers of the large nations in Europe and different states in the Union and Canada, the average loss of time through sickness of the wage earner is nine days per year. Estimating this loss on an

average of two dollars per day and an additional cost of one dollar for medical attendance, means for the 2,300,000 wage earners of our Dominion an economic loss of over $64,800,000 per year. It is surely time for us to recognize the handwriting on the wall.

The economic disadvantage at which a large proportion of the wage earners (particularly the unskilled) and their families are placed as a result of low wages and consequent insufficient annual income, makes it impossible for them to obtain sufficient and efficient medical service. Underlying all of the economic factors is the fact of poverty and the partnership, poverty and disease.

Inasmuch as employer, employé and the public are all, more or less, responsible for conditions causing sickness amongst the wage earners, and their families, it is quite obvious that a system that will hold these responsible for the cure of disease and the amelioration of conditions brought about by disease, seems to be the most sane, the most just and the most democratic.

Effect of Insurance.

Health insurance, in its most highly developed form, provides for adequate cash and medical attention to all wage earners in time of sickness; distributes the cost among the employer, the public and the wage earner, according to their responsibilities. It becomes an effective health measure by stimulating the co-operative efforts of the three responsible groups, and by linking their efforts with those of the nation, state and local public health agencies, co-relates all the forces at work in the prevention of disease, and affords a better basis for the co-operation of the medical profession.

Under an efficient health insurance system, a contribution of approximately 50c. per week for the insured person, 20c. by the employee and 10c, by the government, would enable the insured person to receive $7.00 per week when disabled on account of sickness or any industrial accident, for a period not to exceed twenty-six weeks in one year. Secondly, adequate medical and surgical care during disability; Thirdly, medical and surgical care of wife of insured person during confinement; Fourthly, a death benefit of $100.

A government system of health insurance could unquestionably be adapted to conditions both in the United States and Canada, and when adapted will prove to be a health measure of extraordinary value.

It is a regrettable fact that, notwithstanding all the efforts that have been put forth to control the two most prevalent and the two most impoverishing of preventable diseases on this continent, that is, tuberculosis and typhoid fever, while the death rate from these diseases has been materially reduced, yet they are still claiming an appalling toll annually, and the loss to the nations can no longer be disregarded by our government.

Prof. Irving Fisher estimates the annual loss from tuberculosis for the United States and Canada to be $1,235,000,000. This is made up as follows: Loss to patients in sickness and death, $665,000,000; loss to the nation, $570,000,000. The vital capital dissipated in the United States and Canada annually from typhoid fever is not less than $165,000,000, and the amount appropriated for public health administration for all the large cities in the United States and Canada is a little over $15,000,000 per year. Approximately 10 per cent. of this is being used for the prevention of typhoid fever, a disease that is responsible for $165,000,000 loss.

It is claimed that the present toll from typhoid in New York City, notwithstanding their wonderful reduction, amounts every year in vital capital to approximately $4,000,000. Three hundred and thirty thousand persons suffer from this disease annually in the United States and Canada, and twenty-two thousand die.

Obviously then, health insurance points the way to the new democracy, the new socialism. The world is preparing a great cauldron or melting pot into which must be thrown the present so-called socialism, the present so-called democracies and autocracies, the combines, the profiteers, and we hope by a sufficient purging to evolve from this a true democracy that means freedom and justice to all.

Editorials

THE PROVINCIAL LICENSE BOARD

The Provincial License Board has made considerable progress lately in its fight against the general sale of medicated wines. The Board issued a statement Nov. 3rd, to the effect that a number of medicated wine brands came under the prohibition of the Canadian Temperance Act, and that their sale must stop forthwith. This decision, with the instructions, followed analyses of the wines in certain laboratories used by the Board. It is expected in the future that such wines can only be sold on doctors' certificates, and in quantities of not more than six ounces at a time. The brands named in their order are: Wilson's Invalid Port Wine, Dr. Emerson's Invalid Port Wine, Pevoy's Port Wine, Monikess Port Wine, Puritan Port Wine, Dr. Kilborn's Port Wine, Dr. Coventry's Port Wine, St. Francis Invalid Port Wine, and and Vin St. Michel.

ECONOMY IN FOODS

We have little to add to the article of last month regarding the very great importance of strict economy in the use of foods, particularly as to bacon, beef, products of wheat, and milk, and sugar. Many complaints are still being made, very justly we think, regarding the failure of the officers to control prices. But let our physicians give the public to understand that the two questions, the one regarding economy, the other regarding prices, are

absolutely distinct and separate. If members of our profession cared to use their influence in the direction of influencing the politicians to regulate the prices, or make some serious attempt to do so, we believe they would be doing good work; but, so far as the public are concerned, all should economize.

Lord Northcliffe was asked when in Canada, "What about bacon prices?" Answering, he said, "The great urgency of food control was saving food, not money. It is thoroughly well known that the world's supply of food is not sufficient to feed both civilians and soldiers over one year even. Who is going to go short? I am one of those who do not propose to have the boys in the trenches go short."

Lloyd George said, late in October, that economy in Great Britain resulted in the saving of food supply from 5 to 7 per cent. Then he adds something that should be told to the inhabitants of Canada, "That in itself means the saving of hundreds of thousands of tons."

THE PRICE OF FOOD

We have no desire at the present time to discuss in detail regulations of the price of food. Our aim has been up to the present to show the supreme importance of economy in the use of foods because of the great scarcity which otherwise will occur next spring, and we fear that our men in the trenches will be the chief sufferers therefrom.

If, however, greater efforts were made to control prices the public would be more willing to economize. It may seem strange to express the opinion that

lowering of prices will make us more economical. The public expected that when the Food Controller was appointed some vigorous attempts would be made to lower unreasonable prices, and because there has been so little evidence of any such attempt people are dissatisfied and angry, and when the Food Controller tells them to eat less, they are inclined to ask him to mind his own business. We regret exceedingly that the public should misunderstand the question to such a serious extent, and we also regret that matters have not been more clearly explained to our citizens.

MEDICAL WORK IN ENGLAND

Lt.-Col. Hadley Williams, C.A.M.C., London, Ontario, made some remarks about the middle of October which were greatly misunderstood. At the time the remarks were made he was simply giving an extemporary address, chiefly on Overseas Military Surgery. To avoid mistakes we shall give his own words as reported October 15th. "I had not in my mind, and therefore did not state, that I had been the means of preventing large numbers of unnecessary operations which, without my interference, would have been performed. I made no remarks which could convey an implication upon the professional skill of surgeons in the hospital at Orpington, or anywhere else, either in the British or Canadian Service. I was discussing slightly the nature of the duties which I had to discharge as Surgeon-in-Chief, which were not to operate myself as a rule, but generally to supervise the work of the surgeons

under me. The point referred to was the necessity, in case of wounds which had become septic, to watch them, if necessary, for months, until all infection had died out, in order that secondary operations might be successful."

HEALTH MATTERS IN TORONTO

Dr. Charles Hastings, M.O.H., Toronto, has an unusually difficult task in trying to protect the public in the city. For years he has been endeavoring to secure pure milk, and has had an uphill fight against the vendors of that food. Recently he has found opposition in an unexpected quarter. A restaurant keeper watered the milk he served to customers to an illegal extent. We are told by the daily press that a police magistrate fined the culprit, who declared (according to the *Toronto World*) that he was anxious to water the law by having the fine returned.

FINANCIAL POSITIONS OF GENERAL HOSPITALS

The *Daily Standard* of Kingston, October 14, 1917, published an article explaining especially the position of the Kingston General Hospital. It referred to the prominence which had lately been given to the financial conditions of the hospitals of Toronto. It pointed out the facts, which the citizens of Toronto had been seriously considering for some time, especially regarding the deficits for last year in the various hospitals, namely: Western, $20,000; the Sick Children's, $30,000, and the General, $80,000. It goes on to state: "In marked contrast

to this is the financial statement submitted to the Board of Governors of Kingston General Hospital at its last meeting. The year's operations show a surplus of about $300.00." We doubt if any city hospital in the province can show anything like so good a result for the past year. The position of the Toronto General Hospital had become so serious that the Governors were much alarmed. It would appear that its financial position has gradually been growing worse since Dr. Charles O'Reilly ceased to be its Superintendent. The Governors acted very wisely when they decided last spring that an outside expert should make a thorough examination and ascertain, if possible, the causes of the serious deficits.

In May the Toronto Bureau of Municipal Research undertook the survey, and in due time reported. We do not know that their report has been given to the public, but it seems likely from the opinions expressed by others, they discovered many causes of the deficits.

At a meeting of the Trustees, held October 24th, Horace L. Brittain, Ph.D., Managing Director of the Toronto Bureau of Municipal Research, was appointed Superintendent of the Hospital for one year, with Dr. C. K. Clark, Medical Director, to advise as to matters on the medical side.

Since the above was written it has been suggested by Finance Commissioner Bradshaw and Dr. Hastings, M.O.H., Toronto, that a central Board of Trustees be formed by the trustees of the different hospitals. All units should be run under one general manager with good business capacity. At present no two hospitals have the same system of records and accounts. Each buys its own supplies and has its

own rules of management. With no food control, no purchasing control, no cost account records, there was inevitable waste of money and energy, as well as a lack of effectiveness.

Under the proposed system supplies of provisions, coal, drugs and other supplies could be bought in such quantities that substantial reductions would be obtained. It would enable a uniform system of accounts and make possible the obtaining of month to month statements of the exact position, financially, of all the hospitals.

EDITORIAL NOTE

Conditions in Hungary

We are told by a prominent newspaper in Budapest that Hungary has suffered most severely of all the belligerent countries in proportion to population. It goes on to say the war has caused the destruction of man power at the front, which can hardly be estimated, approximately, but the devastation caused at home seems to have been even more terrible than that among the fighting forces. Deaths due to bad and insufficient food have increased during the last year in a very marked way.

News Items

DR. FLEXNER'S ADDRESS

Dr. Flexner, of the Rockefeller Institute, delivered an interesting address in the Convocation Hall of the University of Toronto in the evening after the opening of the Connaught Laboratories, October 25, 1917.

He first gave an account of the work done by Dr. Carrel in the treatment of wounds infected by the gas bacillus. In the early stages of the war surgical science was staggered by the frequency of gaseous gangrene and its terrible effects. No adequate preparation had been made to control this peculiar form of infection because of its rare occurrence prior to the war. Dr. Flexner told of the activities in research work, which were inspired by the alarming consequences of the infection suffered by hundreds of the men who were wounded in the first few months of hostilities. The particular micro-organism responsible for the condition had been discovered in 1892, but from the time of its discovery until 1914 only two hundred cases of infection had been reported. The bacilli seemed to be omnipresent. The soils of France and Flanders, being highly fertilized, also bore a high content of the bacilli in a very virulent form.

Dr. Flexner then gave the history of the experiments carried on in the Institute by Dr. Carrel, which resulted in the establishment of his now famous technique for the sluicing of wounds, with a compound of chlorine and boric acid, which brought about a definite control of the infection. He told of the provisions made by the Institute for the teaching of this technique to the student medicos and members of the medical staff who are to go overseas for service with the American troops at the front.

An extension of the research work resulting in the development of antitoxin was started at the beginning of the year, when cultures of the gas bacilli, taken from badly infected cases at the front, were secured by the Institute. By a series of experiments Dr. Bull had developed an antitoxin which has been found perfectly successful in animals and rendered them immune to infection. Other experiments would also indicate that

the new antitoxin has curative properties, fortifying the body so that the disease is suppressed even after infection.

Experiments were now being made at the front, and there is reason for confidence that the dread gaseous gangrene is about to be controlled by antitoxins as effectively as tetanus, typhoid and other diseases of a bacterial origin have been. The curative treatment of the disease by the new antitoxin had been tested in the Institute, and in one case, which had been considered as hopeless, the application of the antitoxin had brought about a very rapid amelioration of the condition, an arrest of the infection, and final healing of the infected wound.

The Institute was now collecting quantities of the antitoxin, and Dr. Bull, its discoverer, will shortly go overseas to continue his experiments at the front.

THE CONNAUGHT LABORATORIES

The Connaught Laboratories of the University of Toronto, situated on a fifty-acre farm on the Vaughan and York townline, eight miles north of St. Clair Avenue, were formally opened October 25, 1917. The Laboratories and the farm are the gift of Col. Albert Gooderham, who handed the title deeds of the entire property to Sir Edmund Walker, who received them for the University of Toronto. The monetary value of the gift totals $75,000.

The Laboratories have been in operation for over a year, in continuance of a work begun shortly after war broke out, and now supply all the antitoxins—used in the second British Army Corps, which includes all the men of the Canadian Expeditionary forces. It is the only institution of its kind in the Dominion, and has already become a formidable though friendly rival of the Rockefeller Institute and the Pasteur Institute. In it is prepared all the tetanus serum, typhoid vaccine, pneumonia serum, Pasteur treatments, and other antitoxins used for the prevention and arrest of bacterial diseases amongst the men of the overseas and home forces, and also in the public health work of the provincial authorities. Antitoxins are also sent out from the Laboratories to all parts of the Dominion.

In a short address leading up to the presentation of the deed of the gift to the University, Col. Gooderham told of the beginning of the enterprise which, he said, had its start in the ambitions of Dr. J. G. Fitzgerald to establish a private laboratory

for the production of antitoxins. Dr. Fitzgerald, who is now director of the institution, started the work in a small stable on Clinton Street four years ago. The present institution, with its complement of modern appliances and equipment, was but a fulfilment of Dr. Fitzgerald's idea, in the building up of which, he said, he had been fortunate in finding an opportunity for service.

Sir Edmund Walker, on behalf of the Board of Governors, gave thanks to Col. Gooderham for his generous gift, which he characterized as a blessing to humanity and an effective instrument for the advancement of science.

His Excellency the Duke of Devonshire before declaring the formal opening of the Laboratories, paid a kindly tribute to the quality of public service displayed in Col. Gooderham's gift to the University. His Excellency was reminded of the remarkable advances made by science during the last three years, not only in connection with war work, but in the general betterment of the health of the world at large.

Sir William Hearst regarded Col. Gooderham's gift as "the most valuable and most important that has been made in recent years." The Provincial Government, he announced, had set aside an endowment of $75,000, which would be applied to the maintenance of the institution. The provincial contribution, together with $25,000 which Col. Gooderham had undertaken to secure from private sources, would represent a total endowment of $100,000 for the Laboratories. Ontario had good reason to be proud of the advancement which had been made within its borders by this branch of science. The prevention of typhoid alone during the present campaign would warrant any measure of support given by the province. There had only been 167 cases of typhoid reported from the ranks of the many thousands of men who had been mobilized in Canada, and when he was in England he had been told that only one death because of this disease had occurred in the Canadian forces, and this case was one where the unhappy victim had refused to be inoculated against it.

UNIVERSITY OF TORONTO ALUMNI DINNER

An informal dinner was held in Chicago at the Intercollegiate Club, on October 25th. It proved a most enjoyable affair. Those present were: A. H. Keyes, 1005 N. State Street; John Segsworth, Wilmette; F. A. Cleland, Toronto;

J. A. Massie, Santa Fe, N.M.; Henry H. Merrill, 317 S. Central Park Ave.; Chas. J. McIntyre, 2332 Erand Ave.; H. M. Darling, 111 W. Monroe St.; Wm. Cuthbertson, 1027 E. 46th St.; Chas MacLellan, 6921 Wentworth Ave.; Lorne Robertson, Stratford, Ont.; W. F. Dickson, 6200 Kimbark Ave.; W. A. Campbell, 4131 Michigan Ave.; W. H. B. Aikins, Toronto; Hugh A. Cuthbertson, 6242 Woodlawn Ave.; Henry J. Way, 3501 W. Jackson Blvd., and Capt. H. R. Holme, Capt. R. J. W. Brooke, Capt. A. Stewart, of the British Recruiting Mission.

General Logie, of Military District No. 2, in behalf of the Militia Department, has requested the city of Toronto to grant the use of twenty-five acres of land immediately north of Grenadier Pond in High Park as a site for a hospital for returned soldiers. He said the Government was willing to arrange buildings to provide accommodation for 1,000 surgical cases. Mayor Church at once supported the application, and at the time of writing it is expected that the request will be granted.

We understand that the University Base Hospital has settled down for work at Basingstoke, which is in Hampshire, about thirty-five miles from Southampton. The capacity of the hospital, which is practically a new one, has been raised from 1,040 to 2,000 beds. As it was impossible to bring any supplies from Saloniki, the University Hospital Supply Association has been asked by the Officer Commanding, Dr. Wm. Hendry, to send the necessary articles for proper equipment.

A pleasant reunion. The graduating class of 1892 from the University of Toronto held a banquet at the Carls-Rite Hotel, Toronto, on the evening of November 15th, when Dr. Middlebro, of Owen Sound, acted as chairman. The function was a very pleasant one in all respects, and we hope to have something to say regarding it in our next issue.

Personals

Drs. Wallace Scott and Graham Chambers are now at Shorncliffe.

Capts. Jas. Bell, Thos. Bell and John Cathcart, C.A.M.C., were awarded the military cross, October, 1917.

Dr. Charles Temple and William Clark (Capts.) are in Toronto, on leave, at the time of writing.

Dr. McQueen (Lt.-Col.) was placed in command of Bushy Park Red Cross Hospital.

Dr. W. Brydone-Jack, Vancouver, B.C., has been appointed Superintending Engineer of Public Works for Manitoba and Saskatchewan.

Dr. R. M. Calder, M.D. (Tor., '91), after practising fourteen years in Petrolia, removed to St. Catharines, Ont., about the middle of November.

Surgeon-General J. T. Fotheringham is still actively engaged in work at Ottawa. He paid a flying week-end visit to Toronto, October 10th.

Dr. Gilmour, of Toronto, well known in connection with his work at Grace Hospital, is now in charge of the Surgical Service at Orpington.

Dr. Geo. W. Badgerow, formerly of Toronto, has been appointed a Consulting Surgeon for the South African Eye and Ear Hospital in Richmond, England.

It was reported in London on or about October 1st that the British War Council had completely exonerated Surg.-Gen. Baptie from all responsibility for medical disasters in Mesopotamia after careful examination of the facts.

Dr. George C. Livingston, who for the past year has been Assistant Superintendent of the Toronto General Hospital, resigned November 13th, to join the C.E.F. He will be attached for a time to the C.A.M.C., at the Exhibition Camp.

Dr. John Jenkins (Major) has taken over the work that Dr. Andrew MacPhail (Major), of Montreal, was doing in France for over a year before he returned to Canada.

It was reported in London, England, October 25th, that General Carleton Jones would return to Canada, and have for residence Ottawa, where he will work in the Medical Service.

Surgeon-General Aukland Geddes, formerly Professor of Anatomy, McGill University, has been made a Knight Commander of the Bath. He is a brother of Sir Eric Geddes, First Lord of the Admiralty, Great Britain.

The Military Cross has been awarded to the following officers of the C.A.M.C.: Captains Ronald Macdonald, Winnipeg; Robert Manion, Fort William; Archibald McCausland and Ashley Cooper, Alberta; W. Lawson, H. Mustard and Fred. Pees.

We regret to announce that Dr. R. J. Wilson, of 20 Bloor Street West, Toronto, who was for some time engaged in active work at the Ontario Hospital at Orpington, is now somewhat seriously ill, and is a patient at the Base Hospital (old General), Toronto.

Dr. Harley Smith, another of the Staff of the Hospital at Orpington, is, at the time of writing, in Canada on leave. He expected, when we last saw him, to return overseas, and he hoped for a position at the French-Canadian Hospital at St. Clair, of which Dr. Casgrain is Commanding Officer.

Dr. A. D. Watson, of Toronto, has recently published a book of poems, entitled, "The Heart of the Hills." The reviewer in the *Globe*, November 3rd, speaks highly of the book, and he says that one poem, "Tobogganing," will attract all lovers of this sport. "It is the best poem descriptive of tobogganing that has appeared."

Lt. W. P. Hogarth, a student in Medicine, in the University of Toronto, went overseas with the University Hospital, and served for two years and two months at Saloniki. Then he served for a time as "surgeon probationer" in the navy. He hopes now to complete his course in medicine, having entered his third year.

The two sons of Dr. G. Herbert Burnham were well when last heard from. Maj. Sidney Smith Burnham was wounded in Sept. 1916 and had previously been mentioned in despatches. He was given the Distinguished Service Order, October 18th, 1917. Another son, Capt. Howard Burnham, went over with the C.A.M.C. He was soon attached as Medical Officer to an artillery brigade. He was mentioned for distinguished conduct, in June, 1915, and received the Italian military medal for valor, in May, 1917.

Dr. Fred Burnham, C.A.M.C., Winnipeg, went overseas early in the war, and was for an extended period a member of the staff of a Serbian Hospital. While there the decoration of the Order of St. Sava was bestowed upon him by the Crown Prince, and in addition he received the official thanks of the Governor of Macedonia, and the Mayor of Vodena. He passed through London, England, October 15th on his way to Canada, with the object to enlist sympathy on behalf of the stricken people in the Balkans.

It was reported in Ottawa, November 5th, that Brig.-Gen. C. E. Ashton had been appointed Acting Adj.-Gen. in succession to Maj.-Gen. S. C. Mewburn, now Minister of Militia. Gen. Ashton's many friends in Brantford and other parts of Ontario heartily rejoice in his success overseas. His many friends in London, England, tendered him a dinner on or about November 4th in honor of the good work he had done in Great Britain and France. While offering him their congratulations they also wished him success in his new duties in Canada.

Dr. John Malloch, after going from Saloniki to England, was sent to Orpington to take charge of the Surgical Service at the Ontario Hospital. After working there a month he was given his choice to remain or go to his old unit of the University of Toronto, which is now at the new Hospital at Basingstoke. He chose Basingstoke.

Capt. R. B. Crompton, M.B., Toronto, '15, went overseas as a Staff Sgt. in the University of Toronto Hospital Unit. While working in the hospital at Saloniki he was promoted to the rank of Captain. He was invalided home the latter part of 1916, and for a time served in a local base hospital. Last August he returned to Great Britain and, according to a report

recently received, he has left for China on transport duty in charge of the coolies. Capt. Crompton's home is in Brampton, Ontario.

The latest report from Hon. Dr. Beland, who is still a prisoner in Germany, indicated that he is in good health. He appears to have recovered his spirits a good deal after the blow of his wife's death. He is well liked by his fellow prisoners, and has given his medical services and cheerfully to many of them. It is stated, in addition, he is acting as a most efficient cook in a certain kitchen maintained by British prisoners at their own expense.

A new Hospital Board was appointed early in November. It is expected that the Board will travel throughout Canada, and inspect all the Military Hospitals. The following are members of the Board: Mr. I. H. Cameron, representing Surgery; Dr. Donald McGillivray, representing Medicine; Dr. Clarence Starr, representing Orthopædic Surgery; Dr. J. D. Courtney, Ottawa, representing Eye and Ear Surgery, and Dr. Smith, Montreal, representative X-ray. The Board met in Halifax, November 7th. After inspecting the hospitals in the Maritime Provinces it will proceed to Quebec, Ontario, and the Western Provinces out to the Pacific Coast.

Obituary

JNO. R. McRUER, M.D.

Dr. J. McRuer, formerly of Huntsville, Ont., died at Denver, Col., October 21st.

RICHARD ALFRED IRELAND, M.B.

Dr. R. A. Ireland (Capt.) was killed in action early in November. His name first appeared in the casualty list, November 11th. In his early days he lived in Trenton, Ont., and graduated M.B., from Toronto University in 1911. After practising for a short time in Clinton, Ontario, he joined the Medical Staff of the Homewood Sanitarium, Guelph. He went overseas as M.O. of the 76th Battalion, in 1915.

H. R. BRIGHT, M.D.

Dr. H. R. Bright, of Athens, Ont., who graduated in Medicine, 1905, died suddenly, November 9th. He had been in good health and was attending his patients as usual up to and during part of the night before he died.

HON. T. S. SPROULE, M.D.

Hon. Dr. Sproule, of Markdale, Ont., died suddenly at his home, November 10th. Early in May of last year he underwent an operation for hernia, and it was presumed that he had quite recovered within a short time after. However, we learn by the newspapers that he was seized suddenly with intestinal trouble and died within a few hours. He was a Member for North Gray in the Commons for many years, for four years Speaker, and was made a Member of the Senate in 1914. He was also for many years Grand Master of the Orange Order of British North America. He was seventy-four years of age at the time of his death.

WM. J. MICKLE, M.D., LL.D., F.R.C.P.

Dr. W. J. Mickle, brother-in-law of Professor Ellis, died at Allandale, Ont., Nov. 14th, aged 70. He was born in Guelph, and graduated M.D. in 1866 and LL.D. in 1906, from the University of Toronto. After receiving his M.D. he went at once to England, where he soon distinguished himself. He was appointed a lecturer at London and Middlesex College, and for many years was considered an authority on brain and other nerve diseases, and for some time was one of the editors of the publication *Brain*. In 1887 he was elected a Fellow of the Royal College of Physicians. He was compelled to retire from active work some years before his death. After his retirement from arduous work he lived mostly in Canada.

Sgt. R. Mar Stirling, second son of Dr. J. A. Stirling, Picton, Ont., was killed in action "somewhere in France," October 26th, aged 28.

Mrs. Henry, widow of Dr. James Henry, and mother of Dr. T. H. Henry, died at her residence, Orangeville, November 14th, aged 76. Her husband, one of the best-known physicians in Western Ontario, was a member of the Ontario Medical Council for many years.

Book Reviews

Practice of Medicine. A manual for students and practitioners by Hughes Dayton, M.D., associate attending physician, New York Hospital, attending physician Hudson Street Hospital; formerly instructor in physical diagnosis, Cornell University Medical School, New York. Third revised edition. Lea & Febiger, Philadelphia and New York, 1917.

The appearance of a third edition of this manual of medicine would indicate that there is a field of usefulness for such epitomes. While to the practitioner we doubt if there is much appeal in such a condensed practice of medicine, there is a very useful purpose served to the student as a hasty means of revision for examination purposes, and to nurses and others who need a general acquaintanceship with medicine.

Certainly the whole field of internal medicine is covered in a brief, concise fashion, while certain diseases such as typhoid fever, tuberculosis and pneumonia are developed more fully. To condense into a small pocket manual the essentials of the practice of medicine is no mean feat, and Dr. Dayton has indeed admirably succeeded in his task.

The Treatment of War Wounds. By W. W. Keene, M.D., LL.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. 12 mo of 169 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $1.75 net. Canadian agents, The J. F. Hartz Co., Toronto, Ont.

At the present time no small volume has reached us that has more value than Keene's Treatment of War Wounds. The treatment of wounds has been wonderfully changed since the war, and probably no change has been greater than the Dakin-Carrel Method. While there has been some question raised as to the utility of this method on all stages of war infection, there is no question as to the value of the method in infective wounds. There is no question of its efficiency in war surgery, if the patient can remain at the hospital in which the treatment is instituted. There appears, however, to be a serious change if the treatment is broken.

For instance, by removal of the patient, who has begun the treatment, and has to be removed to the base, say one or two days off. In this case the absence of treatment has produced exceedingly bad results, far worse than if treatment had not been started.

The book contains the Dichloramin-T treatment of wounds, which is at the present time revolutionizing the surgical dressings, also the treatment of Tetanus and the wonderful discovery of an anti-toxin against Gas Gangrene, which has robbed that dread complication of many of its horrors.

The book should be read by all practitioners, whether interested in war surgery or not. The advancements are of great value.

Influence of Drugs on Skin Reactions

Kolmer, Immerman, Matsunami, and Montgomery (*Journal of Laboratory and Clinical Medicine*) emphasize that physicians have not realized as a rule that the oral administration of certain drugs may influence skin reactions by increasing their degree and severity of producing well marked papular or pustular reactions in the skin of persons who did not react to the injections in preliminary tests. As a result of their investigations they found that iodides, particularly potassium iodide, influenced the luetin intracutaneous tests to a marked degree. Normal, nonsyphilitic persons, reacting negatively to the luetin test, may show marked reactions when tested after the oral administration of sixty or more grains of potassium iodide. It was noted, however, that the cutaneous tests are not as readily influenced as the intracutaneous. The use of potassium iodide also increased the tuberculin reactions in persons shown to be sensitive. The authors believe that this action of the iodides is responsible for the discrepancies in the results that have been reported concerning the luetin reaction.—*American Medicine*.

The Mayo Foundation at Rochester, Minn., which has been affiliated with the University of Minnesota for a trial period of two years, has lately been given to the University with all restrictions removed.

Selections

Skin Diseases and their Treatment under War Conditions

Henry MacCormac states that in the present war the losses occasioned by diseases of the skin have been considerable, and that dermatologists are much concerned with two questions: first, whether the art of this specialist can prevent these skin conditions, and second, when they have arisen how best he can cure them.

In France the problems presented are new; unusual types of skin affection have arisen, while the progress of war, the environment of the army in the field, its ebb and flow and the complicated movements of its being, render impracticable those processes familiar in the quiet habit of civil life.

In dealing with diseases of the skin he says that we are content to know that not only are we alleviating illness, but further, since nearly every case will return to duty, we are able to add considerable reinforcements to the army. We are dealing with men whose health is but little impaired, many of whom are highly trained soldiers, and who from a purely military point of view are of the utmost value to the combatant forces. MacCormac particularly emphasizes this fact because it is so necessary to insist that the employment of the highest skill and best methods are well repaid by the results obtained. The work of a dermatologist is important for a further reason. Where so large a proportion are affected with contagious diseases, the cure of one case may mean the prevention of many others. The problem is not a new one. During the American Civil War, out of an army of some 600,000 men, 32,000 cases were diagnosed as itch, and another 35,667 were merely recorded as skin disease. So severe was the former complaint that its pathology was disputed at the time. During the Napoleonic campaign cases of itch were counted by the hundred thousand.

The problem is a serious one. Medical science has curbed many army diseases, but the scourge of scabies still survives to the present time. Naturally, difficulties arise in the treatment of skin conditions on account of the moving forward of the troops over contested ground. In Paris the director of St. Louis Hospital assured the writer that the incidence of scabies in the troops has been greatly lessened since the beginning of the war.

This has also occurred among the Belgian army, due to the establishment of an admirable bathing system and the establishment of dermatological centres in various sections where expert opinion and treatment is available. The French army has also established these centres and cutaneous affections have been less severe among the French soldiers than among the British soldiers.

MacCormac approves of a scabies station for each army corps. The establishment of these stations would release beds and personnel elsewhere employed in the treatment of skin diseases and each medical officer could deal with a large number of cases and an actual saving would be effected.

Since scabies in France differs in some important features from the form seen in civil life, medical officers must know what to look for. The hands are often entirely free from lesions, while interdigital burrows, that pathognomonic sign, are only present in about 13 per cent. The problem is further complicated by the presence of lesions and itching caused by pediculi. The louse-bitten soldier regards pruritus as a normal accompaniment of his life. The pediculosis is acute rather than chronic and presents a close resemblance to scabies, at times most puzzling. Fortunately the louse never attacks the penis, while this organ is frequently affected in scabies, and the presence of papules or crusts there is of the greatest help in forming a diagnosis. Any system of regimental inspection for the detection of scabies must permit of an examination of the whole body and above all of the penis. Interdigital vesicles rather than burrows should be sought for; impetigo of the buttocks is pathognomonic of scabies, and every patient with boils should be regarded as suspicious, as they form 28.4 per cent. of the pyodermic complications, either alone or associated with impetigo.

The treatment of scabies offers a wide field for discussion. In this prevention is of primary importance. How does a soldier acquire this disease? Dermatologists insist that prolonged and intimate contact is necessary. Since opportunities for removal of clothing are comparatively rare and offer themselves only when in rest, infection must occur at this time, and as it is then that blankets are chiefly used, they may be the means of transmitting the disease. No doubt horses and a venereal origin account for some cases—a small and negligible class. Were it possible to disinfect blankets more frequently, using the Clayton sulphur vapor method, scabies might be

greatly lessened. Another source of infection—the importance of fresh cases from England or the base—merits some reference. These men may be removed, but the scabies "carrier," the individual who has been partially cured by methods such as sulphur fumigation, is a power difficult to deal with.

MacCormac states that under conditions of active service, the best treatment is that which is best suited to the majority, most easily carried out and least expensive. Any system to be effective must fulfill three conditions: burrows must be opened to permit access of the parasiticide to the insect and ova; the parasiticide should be of such a nature as to destroy the parasite without producing dermatitis; finally, to prevent reinfection, contact clothing and blankets must be disinfected. The first of these conditions is achieved by a hot bath, soap, and a soft brush; the second by the application of sulphur ointment twice daily for three consecutive days, and the third by means of any steam pressure or sulphur vapor apparatus. Showers and steam baths are unsatisfactory and almost useless. To attain success the ointment must be thoroughly rubbed in over the whole body below the neck. The soaping and the application of the sulphur ointment must be done under the direction of the medical officer or carried out by a skilled orderly, as the men attempt to apply it with puttees and boots on. Each man should have a separate portion of ointment. Many other remedies, such as balsam of Peru, B-naphthol, etc., have been tried but are not effective. Discovery of the acarus is the only absolutely certain proof that a man is still uncured. But this test is useless in France, for the acarus is extraordinarily difficult to find, even in marked untreated cases.

Brief reference should be made to the impetigo associated with scabies. Its distribution on the buttocks and frequently over the elbows and knees is very characteristic. This impetigo is of an ecythymatous type, and is caused by streptococcal infection; it is relatively common. Those unfamiliar with it are apt to overlook the primary scabies which may be of slight degree. Its presence in no way contraindicates sulphur treatment, which often acts most beneficially. After the scabies has been cured the same treatment is followed as for ecthyma elsewhere.—*Proceedings of the Royal Society of Medicine,* July, 1917.

Caffein—The Coffee Drug

The growing movement against intemperance has come to include the beverages in which lurk veritable habit-forming drugs, such as caffein or thein (practically identical), found in coffee and tea.

This is of interest to the Physician because of his wide range of intercourse among the people whose life and health he is to conserve. It is of interest, also, because the habitual use of caffein in a beverage so weakens the organs (by inevitable reaction) on which it acts specifically—heart, kidneys, brain and nerves—as to be cause for pathological consideration.

In other words, the "caffeinized" nervous system is not in a normal condition, nor is such an individual in condition to react therapeutically, or with certainty, where indicated drugs are administered.

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used regularly, in place of coffee or tea, is the "way out" for the doctor and the patient.

Soon after leaving off coffee and using Postum, the clearing of the system of caffein is usually apparent and the patient is not only relieved in great measure of the harmful effects of caffein, but his system can react to the remedies indicated.

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Miscellaneous

In pregnancy where elimination is deficient, as indicated by headache, slight disturbance of the digestion and diminution of solids and urea in the urine, sanmetto in connection with calomel is remarkably effective. The calomel acts upon the cells of the body, those of the liver especially, effecting proper removal of the waste and accumulated toxins. Sanmetto increases the activity of the kidneys, in this way promoting the removal of excrementitious products from the blood, and at the same time acts as a systemic tonic enabling the body to more completely dispose of its waste products through its organs of elimination, and resist the evil effects from systemic absorption of auto-toxins.

An Indictment of the Raw Egg

The iconoclasts are abroad and have set about demolishing the ancient prestige of the raw egg. Some of us have for long held heretical views on the subject, but lacking the proper evidence to sustain them, we have remained discreetly silent, fearing in our too great modesty to cast even a suspicion upon so august an institution. But we shall dissimulate no longer, for now we have trustworthy support for our opinion that the raw egg is a mere pretender; yet not the yolk of it, but only the white. The tradition that raw egg-white is especially digestible began probably with the teaching of Beaumont based upon his experiments with Alexis St. Martin. According to W. G. Bateman in the current number of the *American Journal of the Medical Sciences,* raw egg-white is demonstrably suspect as an article of diet for the sick. It occupies a quite unique position among the native protein foodstuffs. In the first place, it does indeed leave the stomach quickly, not because it is digested easily, but because it is not. As Pawlow observed years ago, it has only a feeble power of stimulating the flow of gastric juice, while cooked egg-white calls forth an abundance of juice and unites easily with the hydrochloric acid. Moreover, raw egg-white offers considerable resistance to the action of pepsine and also to the tryptic ferment. Bayliss found that in the intestine it requires seventy hours for the digestion of the raw material to equal that of the cooked, all other things

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in addition to possessing Tonic properties, acts as a restorative and aids starch-conversions. It is rapid in action, highly nutritious and more palatable than ordinary tonics. The use of "Wincarnis" is indicated in all cases of Convalescence from severe illnesses—especially after Influenza—in Anaemia, General Physical Weakness and in the Aged—in cases of Wasting or Inanition such as Phthisis and other tubercular affections. As a Nerve Food "Wincarnis" is most useful in cases of Neurasthenia and other Nervous Disorders.

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being equal. Nor is this all; for raw egg-white was found by experiment to be poorly utilized in the body, from thirty to fifty per cent. being wasted in the fæces. Not content with laboratory experiment, Bateman proceeded to clinical trial. In children and adults he found that raw egg-white given in large enough quantities and for a sufficient time produced diarrhœa, flatulence and other discomforts, while its percentage of utilization was less than eighty-five. In view of these faults and others we have not mentioned he asks whether such a substance has much to commend it as a foodstuff of preference for the sound person, let alone for the invalid. And when the native protein needs only to be coagulated at seventy degrees in order to obviate almost all the effects mentioned, there appears still less reason for using it uncooked. In view of the wide use of raw egg-white, Dr. Bateman's conclusions come to us as an interesting clinical challenge.—*The Rhode Island Medical Journal.*

Camphor in Cardio-Vascular Diseases

Therapeutic observations by Professor Marfori, of the University of Naples, with regard to the action of camphor on the cardio-vascular system, have brought to light certain properties which deserve attention. Hitherto this drug has been looked upon as the last resource to prolong the life of a diseased and exhausted heart, and injections of camphorated oil have been almost exclusively reserved for counteracting cardiac collapse in acute infective disorders or the threatened paralysis of the last stages of heart disease. Professor Marfori and his assistant, Dr. G. Leone, found that the isolated mammalian heart, when poisoned by chloral so as to render the pulsation barely perceptible, could be rapidly restored to action by camphor, and furthermore, that its action on the circulation was very characteristic, as it could be proved that small doses invariably caused a diminution of arterial pressure and at the same time increased the volume of the cardiac pulsations. Only toxic doses of camphor give rise to increased arterial pressure, accompanied by convulsive phenomena which seem to be independent of the vaso-motor centres, as they are observed even during profound narcosis when these centres are rendered inexcitable. Hence during the course of chronic myocarditis with simple cardiac insufficiency, changes in rhythm and auricular fibrillation, Professor Marfori considers no other drug can compete

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The Advantages of Condensed Milk

PURITY

It is a well-established fact that fresh cow's milk may contain pathogenic organisms which spread infectious diseases. When even the slightest laxness exists in the enforcement of milk laws, there is danger.

The use of condensed milk eliminates this danger.

The following extract from Dr. Coutt's Report to the Local Government Board on an Inquiry as to Condensed Milk (London 1911) gives the findings of experts:

> "All epidemiological evidence points to the conclusion that the infecting organisms of such diseases as scarlet fever, diphtheria and enteric fever *are destroyed in condensed milk.*"

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with camphor in sustaining the activity of the heart and steadying the pulse. He noticed that the beneficial effects obtained were continued after the drug was suspended, but recommends systematic treatment for a long period by giving one, or two, daily hypodermic injections of 0·10 gramme in oily solution. These doses may also be given by mouth as they are well borne. In valvular lesions, when disturbance of the pulmonary circulation and hypertension in the right ventricle predominate, camphor is the most rational and efficacious remedy. The drug is also quite useful in the pulmonary sclerosis of tuberculosis and in arterial hypertension with hypertrophied heart, vascular spasm of climacteric origin, and arterio-sclerosis; it is capable of inducing beneficial changes in disordered function of the myocardium and especially of the right ventricle. In conclusion, Professor Marfori says that camphor must no longer be considered merely as a remedy in the hour of death, but rather as a drug which, when intelligently administered, is capable of producing beneficial results throughout the entire course of various cardiac and vascular diseases owing to its special properties, which are distinct from those of other heart drugs.—*The Lancet.*

Awkward Prescriptions

To a pharmacist an awkward prescription is one containing a chemical incompatible, an ambiguity, an error, or an unusually large dose. In the last case, the dose may be intentional on the part of the prescriber for some special or heroic reason, or merely a verbal or arithmetical slip. The obvious course in all such difficulties is to appeal to the prescriber if he is accessible.

Many doctors would perhaps define an incompatible either as a "messy mixture" or as a chemical decomposition. Neither definition is good. An incompatible mixture may be quite elegant and, of course, many decompositions are not incompatibilities. I would rather define a chemical incompatibility as a decomposition in which the chemical or physical properties of the result are different from the intention disclosed. Of course, an incompatibility may not be chemical. An acid added to an emulsion would generally produce a physical incompatibility. Most incompatibles that arise in practice are crude and obvious, but a few are interesting. If a trifling omission, addition, or substitution will set them right, all but the fussiest pharmacists

Pneumonia—
Prognosis—

Osler regards a slight or complete absence of leucocytosis as a very unfavorable sign in pneumonia.

Heart weakness due to the specific action of the poison, to the prolonged fever or to the over-extension of the right chambers, is the important prognostic feature of the disease.

increases leucocytosis; it relieves the heart by increasing the capillary circulation, it hastens the elimination of toxins, reduces the fever and relieves the dyspnoea and cyanosis. The use of Antiphlogistine in pneumonia is a most rational procedure; it is logical; it is reasonable and it is scientific.

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would do that without troubling the prescriber. But, of course, the change must be of no medical importance. Sometimes, without medical knowledge, it is possible to anticipate the normal prescriber's mental process in a prescription difficulty and deduce his inevitable decision. For example, I omitted glycerine from a potassium permanganate gargle. Obviously they could not be put together, nor could a substitute be introduced; the prescriber's way out of the difficulty was inevitable. To assume that he would discard his carefully-selected main ingredient for the sake of a demulcent would be to convict him of weak judgment in prescribing. An equally clear case was a mixture of quinine and iron citrate, and sal volatile. The latter might be wanted for its alkalinity, its stimulating effect, or as a flavor. The first two purposes are defeated by the acidity of the citrate; it can only act as a flavor. So an appropriate quantity of lemon and nutmeg essences was substituted. A mixture of sodium salicylate, sodium bicarbonate, and tincture of iron was cured by substituting iron and ammonium citrate for the tincture. In this case the prescriber was told, and he approved; in the others the matter was decided as too trivial to communicate.

A dangerous but extremely common incompatible is a mixture of solution of strychnine with alkalies. Yet it is by no means undispensable. Strychnine is slightly soluble in water, and it becomes a question of where the danger-point is. Theoretically, the most that is safe is about half a grain (50 minims of solution) in 8 oz. But a drachm in 6 oz. is dispensed every day, with a "shake" label of course. Trouble could only arise through a very remote coincidence. The patient would have to pour out very carefully without shaking all but the last few doses, and then reform and shake thoroughly. Such procedure would yield doses ranging from 0·6 to 1·5 or more of the dose prescribed. Pharmacists do not like these mixtures that rely upon the patient's intelligent obedience. I should dispense a tablespoon mixture double size with ounce doses if the strength exceeded 10 minims per ounce.

A very interesting incompatible is the decomposition of chloral hydrate by alkalies. It can scarcely be regarded as dangerous, or even seriously objectionable; probably the decomposition is not always completed in mixtures occurring in practice. If it is completed the patient gets the sudden action of chloroform instead of the gradual action of chloral. As a rule, pharmacists would dispense as written without comment;

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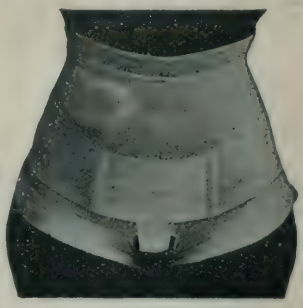

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if the prescriber himself brought the prescription one might raise the point.

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The Prognosis of Gunshot Wounds of the Abdomen

Last year at the Swiss Surgical Congress Professor Sauerbruch narrated his surgical war experiences in Germany, and as the text of this lecture has now come into our hands we may expand with advantage the summary (*The Lancet,* 1916, i., 634), already given of his remarks on the treatment of gunshot wounds of the abdomen. Sauerbruch is convinced of the necessity of immediate operative interference in all gunshot wounds of the abdomen in which the peritoneum is involved, and believes that when this necessity is generally recognized the arrangements for carrying out the operations will readily be improvised at the front. He regards the external circumstances—the operating-room and the appurtenances of a theatre—as in general vastly overrated, holding that correct diagnosis, followed by immediate and technically correct operating, is the only factor which seriously counts. He refuses to speak, as is often done of hopeless operations, in view of the consistently good results of early operation. It cannot be too much emphasized.

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he adds, that men who recover after abdominal injury retain an undiminished capacity for living and for working and do not swell the ranks of the war cripples. Sauerbruch therefore regards the operative treatment of gunshot abdominal wounds as precisely the most encouraging field of action for the military surgeon.—*The Lancet.*

Responding to Malice

When bitterness begins to speak
Of people that I know,
I turn away and gently say:
"I have not found them so."
When envy lifts its angry head
To snarl at friends of mine
I never let myself forget
That I have found them fine.
I won't believe a man is base
Or false, whoe'er he be,
Until the day that I may say
That he's been false to me.

—EDGAR A. GUEST, in the *Detroit Free Press.*

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